REQUEST FOR PROPOSAL FOR CALL ORDER AWARD
Solicitation Number: DTFAEN-12-R-00135

This RFP, and any Call Order issued hereunder, incorporates by reference contract terms and conditions set forth in the General Construction Basic Ordering Agreement (BOA) issued to the Offeror.

Project: Modify and Repair Existing Catwalk Grading, Catwalk Four Corners, and Cab Roof, ATCT, Kinston, NC.

Contracting Officer & Phone Number: Eddie Wright, Jr., 404-305-5760
Required Delivery Time/Schedule: 60 Calendar Days

Required Submissions
1. Price Breakdown consistent with the Schedule of Bid Items
2. A Bid Bond / / **IS** , /X /**IS NOT,** required to be tendered with the offer.

Delivery of Offers
Proposal due date: September 19, 2012, 4:30 P.M. Eastern Time.
Delivery address: ELSA Acquisitions AAQ-510, 1701 Columbia Ave., College Park, GA 30337

Evaluation Factors for Award
Award of a firm, fixed price Call Order contract will be based on price alone.

RFP Attachments: Scope of Work, Drawings & Specifications, Wage Determination # NC12066, dated 7/20/2012, 5 pages.

Firm Fixed Price Offer: $_____

Offer Prepared by:

_____
Contractor Name

_____
Contractor Representative and Title

_____ _____
Signature Date

Offer Accepted by:

Federal Aviation Administration

_____
Contracting Officer Name

_____ _____
Signature Date

Call Order number: _____

BOA number: _____

SECTION 075419.12
Reroof of the ATCT and repairs
In Kinston
North Carolina

Address: 2920 Rouse road Ext,
Kinston, NC 28504

DIVISION 1 – GENERAL REQUIREMENTS

01000 GENERAL REQUIREMENTS

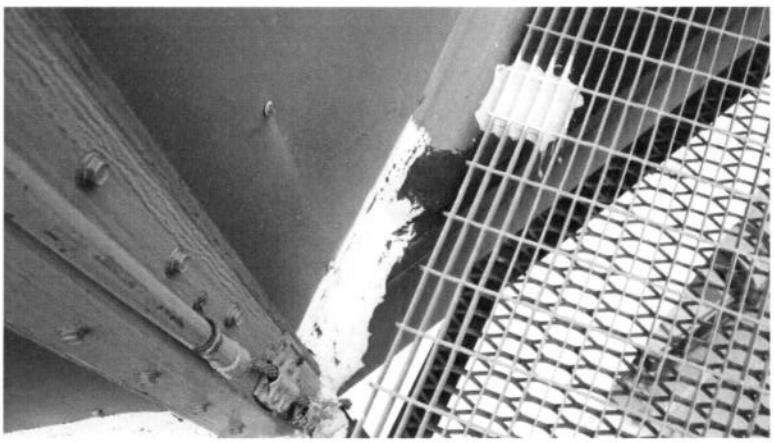
This specification covers the requirements to update Paint the catwalk frame, Reroof the catwalk four corners, water proof the metal under the cab window and reroof the cab roof. Air Traffic Control Tower (ATCT) located at the Kinston, County Regional Airport in Kinston, North Carolina. The address is 2920 Rouse Road ext, Kinston, NC 28504

01013 SUMMARY OF WORK

Scope of Work
Main work
(Due to fund limitation we are requiring to have two proposals one for the main work and the second is for the main + alternate 1).

The contractor shall furnish all labor, equipment, transportation and materials needed to complete the work required under this contract. The work consists of, but is not limited to the following:

1. Clean, Prime and paint the lower cab window frame and the catwalk steel frame required two coat paint.



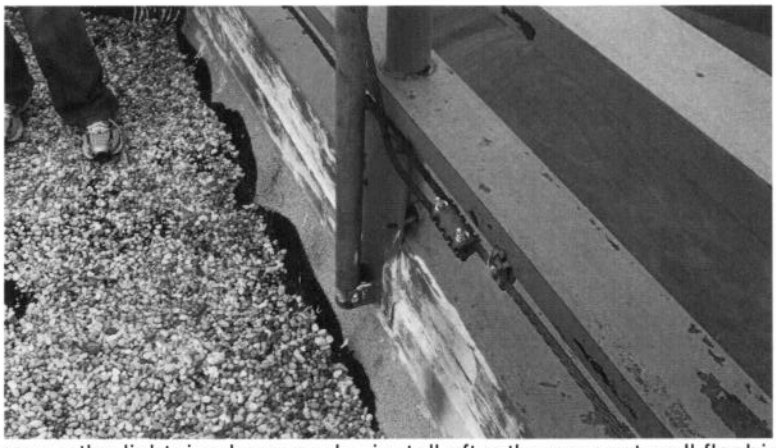
2. Relocate and reinstall the catwalk grating, Remove the tower roof, that consist of four corners an two rectangular sections, then reroof the tower, waterproof the exterior metal panel under the cab window and flash the four corners of the tower roof. Refer to drawings.(This work will required the replacement of some of the bolts on the catwalk) Clean the four metal corners of the tower shaft's, rust proof, and cover this area with PVC metal.

3. Replace bathroom at junction level floor with similar exterior grade CDX plywood dimension, install fully adhered vinyl floor tile and reinstall the existing toilet with new ring. (The contractor is required to get license plumber to remove and reinstall the toilet and the work shall take place after hours)

01033 ALTERNATE (The inductive weld will take place when the facility is not in operation the rest of the work shall take at normal hours)

1. Remove cab roof gravel, and flash material around the parapet wall, curb and hatch.

2. Install one layers of 1" polyisocunurate insulation with a ¼" dens deck cover board mechanically attached.



Remove the lightning base and reinstall after the parapet wall flashing.

3. Install an 80mils PVC Polyester reinforce inductive mechanical roof system (Rhino Bond). With high wind requirement. All the flashing work when possible will be done using PVC metal.

4. Cover the entire cab roof with cross grip walkway pad.

01043 COORDINATION

All coordination between the contractor and the Sector Field Office Manager, the facility employees, and the Airway Facilities Sector Manager shall be through the Federal Aviation Administration (FAA) Contracting officer technical representative COTR (R.E.).

All construction and working permits required by local and state agencies shall be procured by the contractor at no expense to the FAA.

01140 WORK RESTRICTIONS

Ingress and egress to the work areas shall be as directed by the resident engineer. Security precautions against unauthorized site entrance shall be maintained. The contractor shall keep all vehicles, working equipment and materials within the area designated by the resident engineer. **The bathroom work should be done after an hour due to this is the only bathroom at the site.**

Working around and above the cab window frame, and on the catwalk surrounding the cab, requires coordination with Air Traffic personnel so as to cause no disruptions to air traffic. Prior to commencing work, the contractor shall coordinate with the Contracting officer technical representative COTR to make all of the contractor's personnel aware of these requirements and their importance. Even when sufficient advance notice is received from the contractor and agreed to at that time, the FAA can make no guarantees for opportunities to proceed with the work. Every effort will be given the contractor to accommodate the work schedule, but some delay could be anticipated.

01303 SUBMITTALS

A. Related Documents

Drawings and general provisions of the Contract including General Requirements and all Division 1-16 specification sections, apply to this section. If conflicts occur between FAA specification and any other publications, FAA requirements shall govern.

B. Scope

This section covers the procedure and requirements for all submittals. Additional detailed submittal requirements may be specified in other sections of these specifications.

C. Definition

Where the word "Submittal" is used it refers to the submitting of shop drawings, samples, manufacturer's catalog cuts, technical data, specifications, installation instructions, material lists, test reports, certificates, guaranties, operation and maintenance manuals, and as-built drawings.

D. Submittals

Samples, certificates, test reports, and shop drawings shall be submitted in advance for a **determination of specification compliance within 42 calendar days after award of contract**. The time necessary for approval or disapproval of samples, certificates, test reports, and shop drawings is at least seven (7) calendar days after receipt of the items. All materials installed in the work shall exactly match the approved submittal. After a submission by the contractor has been approved, no substitution will be permitted without written approval by the Contracting Officer or his authorized representative. Any disapproved submittal must be re-submitted within five (5) calendar days. Unless otherwise specified, number of copies of submittals shall be as follows:

1. Samples PVC metal and membrane, fasteners, and other items specified in individual sections.
2. Certificates, Test Reports, Warranties, etc.: 3 copies
3. Material Safety Data Sheets: 4 copies
4. Shop Drawings: one reproducible and 2 copies
5. Manufacturer's Brochures: 6 copies
6. Installation Instructions: 4 copies
7. Maintenance Manuals: 5 copies
8. As Built Drawings: As specified hereinafter.

E. Shop Drawings

The term "Shop Drawings" includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract which differs from the plan. Scale of shop drawings: minimum 1/4" = 1'-0" for plans and elevations; minimum 3/4" = 1'-0" for details.

A. The contractor shall coordinate all such drawings and review them for accuracy, completeness, and compliance with subcontract requirements and shall indicate his approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the contractor's approval may be returned for resubmission. The Contracting Officer will indicate his approval or disapproval of the shop drawings and if not approved as submitted, shall indicate his reason therefore. Any work done prior to such approval shall be at the contractor's risk. Approval by the Contracting Officer shall not relieve the contractor from responsibility for any error or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with paragraph B. below.

B. The contractor shall submit to the Contracting Officer for approval one reproducible and two copies (unless otherwise indicated herein) of all shop drawings as called for under various headings of these specifications and two sets of all samples. The reproducible copies of all shop drawings will be retained by the Contracting Officer, and two sets will be returned to the contractor.

01500 TEMPORARY FACILITIES AND CONTROLS

Sanitary facilities are available at the site. The contractor shall keep the bathroom facilities clean at the end of each day. The contractor is responsible for supplying temporary electricity, air, and water as needed throughout the construction of the project.

01600 PRODUCT REQUIREMENTS

General

The contractor shall furnish all materials, equipment, and labor to complete the job unless otherwise specified. **The use of brand names or the identification of specific product source in this specification does not constitute a requirement that they are the only materials that meet the specifications of this project. They**

are used as an illustration of known acceptable sources or products. Each product required for use in the contract drawings and specifications must meet the actual minimum needs of the FAA as demonstrated in the salient characteristics for that product. For use of a product that is not listed as an acceptable source, a test report or product data sheet must be submitted prior to the pre-construction meeting for each product, indicating the product meets the requirements set forth in this document.

Contractor's Warranty

The contractor shall supply the FAA with a one-year workmanship warranty. In the event that any work relating to the catwalk grating, roofing, flashing, or metal work, is found defective or otherwise not in accordance with the contract documents **within one years of completion, the contractor shall remove and replace at no cost to the FAA**.

Manufacturer's Warranty

1. Roof Membrane: The single-ply roofing membrane material shall be guaranteed against defects by the manufacturer and be leak-free for a period of fifteen (15) years after completion. This warranty will identify the FAA as owner of the facility. The location of the facility and the effective starting date of the warranty shall be indicated.

The contractor shall not be responsible for damage to the roof from extreme weather conditions such as tornadoes, lightning strikes, large hail, or damage caused by maintenance people working on the roof surface.

In the event water penetrates the roof system for reasons of either workmanship or material, the contracting officer will notify the contractor in writing within the 1-year workmanship warranty or 15-year manufacturer warranty period. If the contractor fails to remedy any failure, defect, or damage within a reasonable time, the FAA has the right to replace, repair, or remedy the failure at the contractor's expense. All labor, materials, and travel expenses incurred during warranty repairs are considered incidental to the warranty and will not be allocated to the FAA.

01613 DELIVERY, STORAGE, AND HANDLING

The contractor shall store all materials in a manner to protect them from all elements of the weather. Materials will be stored as directed by the resident engineer.

01700 EXECUTION REQUIREMENTS

A. General

Bidders are encouraged to visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the contractor. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions. To arrange for a site visit, contact Brian Riportella at (910) 815-4969.
The contractor shall attend a Pre-Construction Conference prior to starting work at a location agreed upon between the contractor and the contracting officer. Working hours will be scheduled with the Contracting officer technical representative COTR and agreed upon at the pre-construction conference. The contractor shall submit a work schedule for approval prior to beginning work. The contractor shall keep the Contracting officer technical representative COTR advised daily of any change.

Damage to existing facilities and equipment caused by the contractor shall be reported to the Contracting officer technical representative COTR immediately. The contractor will be responsible for repairing, or having repaired

all damage of the building or equipment at the contractor's expense. All repairs shall be accomplished to the satisfaction of the resident engineer.

All work shall be accomplished by experienced workers in accordance with the highest standards of the various work trades involved.

Cleaning

1. Working Area: The contractor shall keep the working area in a clean and proper condition. All rubbish and waste resulting from the execution of the work shall be removed at the end of each day or as directed by the Resident Engineer.
2. Waste Packing Material: Immediately after unpacking, all packing material, case lumber, excelsior, or other rubbish, flammable or otherwise, shall be removed from the building and the premises.
3. Final Clean Up: Upon completion of work, and before final inspection, the contractor shall remove his working tools, equipment, debris, rubbish, and unused materials from the building site.

Disposal

Disposal of rubbish, debris, and removed materials will be off the site at the contractor's expense or as directed by the resident engineer.

Some existing materials that are to be removed and discarded are believed to contain asbestos. It is the contractor's responsibility to dispose of those materials in strict accordance with federal, state, and local requirements.

Safety

The contractor shall be responsible for safety on the work site. It is the responsibility of the contractor to eliminate hazards, which may result in tripping, electrical shock, fire, falling objects, environmental hazards, vehicular accidents, etc. The contractor shall comply with all safety precautions required by OSHA.

01781 PROJECT RECORD DOCUMENTS

See Attachment 3 – Design Drawings List. The drawings of the issue date specified form a part to this specification and are applicable to the extent specified herein. If any conflict exists between drawings and the specifications, the specifications shall govern.

PART 1 - GENERAL CONDITIONS

1.01 DESCRIPTION

A. Scope

The contractor shall furnish all labor, equipment, transportation and materials needed to complete the work required under this contract. The work consists of, but is not limited to the following:

1. Clean, Prime and paint the cab frame and catwalk steel frame required two coat paint.

2. Relocate and reinstall the catwalk grating, Remove the tower roof, that consist of four corners an two rectangular sections, then reroof the tower, waterproof the exterior metal frame panels under the cab window and flash the four corners of the tower roof. Refer to drawings.(This work will required the replacement of some of the bolts on the catwalk) Clean the four metal corners of the tower shaft's, rust proof, and cover this area with PVC metal.

3. Replace bathroom floor, Install CDX plywood, fully adhered vinyl floor tile and reinstall the existing toilet with wax ring.

01033 ALTERNATE 1

1. Remove cab roof gravel, and flash material around the parapet wall, curb and hatch.

2. Install two layers of 1½" polyisocunurate insulation with a ¼" dens deck cover board mechanically attached.

3. Install an 80mils PVC Polyester reinforce inductive mechanical roof system (Rhino Bond). All the flashing work when possible will be done using PVC metal.

Cover the entire cab roof with cross grip walkway pad to install a complete Inductive attached Roofing manufacturer roofing system including membrane, flashings and other components.

B. Related Work

The work includes but is not limited to the installation of:

1. Substrate Preparation
2. Roof Drains
3. Vapor Barrier
4. Wood Blocking
5. Insulation
6. Separation Layers
7. Roof Membrane
8. Fasteners
9. Adhesive for Flashings
10. Roof Membrane Flashings
11. Walkways
12. Metal Flashings
13. Sealants

C. Upon successful completion of work the following warranties may be obtained:

1. Manufacturer roofing Warranty
2. Roofing Contractor Warranty

D. Qualified Manufacturer:

1. **Sika-Sarnafil Canton- Massachusset 80mils Rihnobond**
2. **John Mansfield Denver- Colorado 80mils Rihnobond**
3. **Fibertite Ohio 90mils**

1.02 QUALITY ASSURANCE

A. This roofing system shall be applied only by a Roofing Contractor authorized by Roofing manufacturer prior to bid (Roofing manufacturer "Applicator").

B. Upon completion of the installation and the delivery to Roofing manufacturer by the Applicator of a certification that all work has been done in strict accordance with the contract specifications and Roofing manufacturer's requirements, an inspection shall be made by a Technical Representative of Roofing manufacturer to review the installed roof system.

C. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Owner's Representative and Roofing manufacturer.

D. All work pertaining to the installation of PVC membrane and flashings shall only be completed by Applicator personnel trained and authorized by Roofing manufacturer in those procedures.

1.03 SUBMITTALS

At the time of bidding, the Applicator shall submit to the Owner (or Representative) the following:

A. Copies of Specification.

B. Samples of each primary component to be used in the roof system and the manufacturer's current literature for each component.

C. Written approval by the insulation manufacturer (as applicable) for use and performance of the product in the proposed system.

D. Sample copy of Roofing manufacturer's warranty.

E. Sample copy of Applicator's warranty.

F. Dimensioned shop drawings which shall include:

1. Outline of roof with roof size and elevations shown.
2. Profile details of flashing methods for penetrations.
3. Technical acceptance from Roofing manufacturer.

G. Certifications by manufacturers of roofing and insulating materials that all materials supplied comply with all requirements of the identified ASTM and other industry standards or practices.

H. Certification from the Applicator that the system specified meets all identified code and insurance requirements as required by the Specification.

I. Material Safety Data Sheets (MSDS)

1.04 CODE REQUIREMENTS

The applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.

A. Factory Mutual Research Corporation (FM) - Norwood, MA
1. Class 1-90 (for high wind exposure)

B. Underwriters Laboratories, Inc. - Northbrook, IL

1. Class A assembly

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.

B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.

C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.

D. As a general rule all adhesives shall be stored at temperatures between 40º F (5º C) and 80º F (27º C). Read instructions contained on adhesive canister for specific storage instructions.

E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.

F. Any materials which the owner's representative and/or Roofing manufacturer determine to be damaged are to be removed from the job site and replaced at no cost to the owner.

1.06 JOB CONDITIONS

A. PVC materials may be installed under certain adverse weather conditions but only after consultation with Roofing manufacturer, as installation time and system integrity may be affected.

B. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be cleaned and heat welded before leaving the job site that day.

C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.

D. All surfaces to receive new insulation, membrane or flashings shall be dry. Should surface moisture occur, the Applicator shall provide the necessary equipment to dry the surface prior to application.

E. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.

F. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.

G. The Applicator is cautioned that certain PVC membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with PVC membranes. The Applicator shall consult Roofing manufacturer regarding compatibility, precautions and recommendations.

H. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Applicator shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over pvc felt or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.

I. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air and/or similar methods.

J. The Applicator shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction.

K. All roofing, insulation, flashings and metal work removed during construction shall be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.

L. All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) shall be immediately removed from the site by the Applicator and properly transported to a legal dumping area authorized to receive such material.

M. The Applicator shall take precautions that storage and/or application of materials and/or equipment does not overload the roof deck or building structure.

N. Flammable adhesives and deck primers shall not be stored and not be used in the vicinity of open flames, sparks and excessive heat.

O. All rooftop contamination that is anticipated or that is occurring shall be reported to Roofing manufacturer to determine the corrective steps to be taken.

P. The Applicator shall verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing (letter copy to Roofing manufacturer) to the Owner's Representative for corrective action prior to the installation of the Roofing manufacturer roof system.

Q. Applicator shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify Owner of such condition in writing for correction at the Owner's expense (letter copy to Roofing manufacturer).

R. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.

S. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.

T. The Applicator shall conduct fastener pullout tests in accordance with the latest version of the SPRI/ANSI Fastener Pullout Standard to help verify condition of the deck/substrate and to confirm expected pullout values.

U. The PVC membrane shall not be installed under the following conditions without consulting Roofing manufacturer's Technical Dept. for precautionary steps:

1. The roof assembly permits interior air to pressurize the membrane underside.
2. Any exterior wall has 10% or more of the surface area comprised of opening doors or windows.
3. The wall/deck intersection permits air entry into the wall flashing area.

V. Precautions shall be taken when using Sarnacol adhesives at or near rooftop vents or air intakes. Adhesive odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building. Keep lids on unused cans at all times.

W. Protective wear shall be worn when using solvents or adhesives or as required by job conditions.

X. PVC membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions is hazardous. Appropriate safety measures must be implemented prior to working on such surfaces. Always follow OSHA and other relevant fall protection standards when working on roofs.

1.07 WARRANTIES

Roofing manufacturer Membrane Warranty

Upon successful completion of the work to Roofing manufacturer's satisfaction and receipt of final payment, the Roofing manufacturer Membrane Warranty shall be issued.

Roofing manufacturer System Warranty for 15 years.
Upon successful completion of the work to Roofing manufacturer's satisfaction and receipt of final payment, the Roofing manufacturer System Warranty shall be issued.

A. Applicator/Roofing Contractor Warranty

The Applicator shall supply the owner with a separate with a one year workmanship warranty. In the event any work related to roofing, flashing, or metal is found to be within the Applicator warranty term, defective or otherwise not in accordance with the Contract Documents, the Applicator shall repair that defect at no cost to the Owner. The Applicator's warranty obligation shall run directly to the Owner, and a copy shall be sent to Roofing manufacturer.

B. Owner Responsibility

Owner shall notify both Roofing manufacturer and the Applicator of any leaks as they occur during the time period when both warranties are in effect.

PART 2 - PRODUCTS

2.01 GENERAL

A. The components of the Inductive-attached roof system are to be products of Roofing manufacturer as indicated on the Detail Drawings and specified in the Contract Documents.

B. Components to be used that are other than those supplied or manufactured by Roofing manufacturer may be submitted for review and acceptance by Roofing manufacturer. Roofing manufacturer's acceptance of any other product is only for a determination of compatibility with Roofing manufacturer products and not for inclusion in the Roofing manufacturer warranty. The specifications, installation instructions, limitations, and/or restrictions of the respective manufacturers must be reviewed by the Owner's Representative for acceptability for the intended use with Roofing manufacturer products.

C. Manufacturer to have a minimum of two years experience recycling their membranes at the end of their service life back into new membrane products.

2.02 MEMBRANE

A. PVC polyester reinforced membrane with a lacquer coating.

B. Membrane shall conform to ASTM D4434 (latest version), "Standard for Polyvinyl Chloride Sheet Roofing," Classification: Type III.

1. PVC POLYESTER REINFORCED MEMBRANE-20, 80 mil (2.0 mm), thermoplastic membrane with polyester reinforcement. Use 10ft width.

C. Certified Polymer Thickness

1. Membrane manufacturer is to certify that the polymer thickness is of the polymer thickness specified. Certification is to be signed by the membrane manufacturer's quality control manager. ASTM +/- tolerance for membrane thickness is not accepted.

D. Color of Membrane

1. EnergySmart (white), initial reflectivity of 0.83, initial emissivity 0.90, solar reflective index (SRI) of >104.

2. Other

E. Typical Physical Properties

Parameters	ASTM Test Method	Minimum ASTM Requirement	PVC Typical Physical Properties
Reinforcing Material	-		Polyester
Overall Thickness, min., inches (mm)	D751	0.045 (1.14)	[0.080inches]
Breaking Strength, min., lbf/in. (KN/m)	D751	200 (35.0)	230 (40.0)
Elongation at Break, min.	D751	15%	20%
Seam strength*, min. (% of breaking strength)	D751	75	85
Retention of Properties After Heat Aging	D3045	-	-
Breaking Strength, min., (% of original)	D751	90	95
Elongation, min., (% of original)	D751	90	90
Tearing Strength, min., lbf (N)	D1004	45.0 (200)	50 (220)
Low Temperature Bend, -40°F (-40°C)	D2136	Pass	Pass
Accelerated Weathering Test (Florescent Light, UV exposure)	G154	5,000 Hours	Pass
Cracking (7x magnification)	-	None	None
Discoloration (by observation)	-	Negligible	Negligible
Crazing (7 x magnification)	-	None	None
Linear Dimensional Change	D1204	0.5% max.	0.1%
Weight Change After Immersion in Water	D570	± 3.0% max.	2.5%
Static Puncture Resistance, 33 lbf (15 kg)	D5602	Pass	Pass
Dynamic Puncture Resistance, 14.7 ft-lbf (20 J)	D5635	Pass	Pass

* Failure occurs through membrane rupture not seam failure. Physical Properties shown are prior to applying felt backing, if specified.

2.03 FLASHING MATERIALS

A. Wall/Curb Flashing

1. PVC G410 Membrane

   A fiberglass reinforced membrane adhered to approved substrate using Sarnacol adhesive. Consult Product Data Sheets for adhesive options and additional information.

2. PVC G459 Membrane

   An asphalt-resistant, fiberglass reinforced membrane adhered to approved substrate using Sarnacol adhesive. Consult Product Data Sheet for adhesive rates and additional information.

3. PVC polyester reinforced membrane

   A polyester reinforced membrane used for mechanically-attached flashings to approved substrate using Sarnadisc or Sarnabar. Consult Product Data Sheet for additional information.

4. PVC clad

   A PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles. PVC clad is a 24 gauge, G90 galvanized metal sheet with a 20 mil (0.5 mm) unsupported PVC membrane laminated on one side. The dimensions of Sarnaclad are 4 ft x 8 ft (1.2 m x 2.4 m) or 4 ft x 10 ft (1.2 m x 3.0 m). Consult Product Data Sheet for additional information.

B. Perimeter Edge Flashing

1. PVC METAL

   A PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles. Sarnaclad is a 24 gauge, G90 galvanized metal sheet with a 20 mil (0.5 mm) unsupported PVC membrane laminated on one side. The dimensions of Sarnaclad are 4 ft x 8 ft (1.2 m x 2.4 m) or 4 ft x 10 ft (1.2 m x 3.0 m). Consult Product Data Sheet for additional information.

2. Non-Typical Edge

Project-specific perimeter edge detail reviewed and accepted for one-time use by Roofing manufacturer's Technical Department. Consult Regional Technical Manager prior to job start for review and consideration for acceptance.

C. Miscellaneous Flashing

1. Sarnaflash

A prefabricated expansion joint cover made from PVC membrane. Sarna flash is designed for securement to vertical or horizontal surfaces to span and accommodate the movement of expansion gaps from 1 inch to 4½ inches (25 mm to 114 mm) across. Available in 40 foot (12 m) rolls. Consult Product Data Sheet for additional information.

2. Sarna reglet (Surface Mount reglet)

A heavy-duty, extruded aluminum flashing termination reglet used at walls and large curbs. Sarnareglet is produced from 6063-T5, 0.10 inch - 0.12 inch (2.5 mm - 3.0 mm) thick extruded aluminum. Sarnareglet has a 2¼ inch (57 mm) deep profile, and is provided in 10 foot (3 m) lengths. Use prefabricated Sarnareglet mitered inside and outside corners where walls intersect. Consult Product Data Sheet for additional information.

3. Sarnastack

A prefabricated vent pipe flashing made from 0.048 inch (48 mil/1.2 mm) thick PVC G410 membrane. Available in five different sizes. Consult Product Data Sheet for sizes and additional information.

4. Multi-Purpose Sealant

A proprietary sealant used at flashing terminations. Consult Product Data Sheet for additional information.

5. Sarnacol 2165 Adhesive

A two-component urethane adhesive used for pitch pocket filler. Cures with excellent elasticity and adhesion to various surfaces. Consult Product Data Sheet for additional information.

6. Sarnacol 2170 Adhesive

A solvent-based reactivating-type adhesive used to attach membrane to flashing substrate. Consult Product Data Sheets for additional information.

7. PVC POLYESTER REINFORCED MEMBRANE Coverstrip

8 inch (0.20 m) wide precut flashing made from PVC PVC POLYESTER REINFORCED MEMBRANE polyester reinforced membrane. Used to coverstrip Sarnabar and Sarnadisc.

2.04 INSULATION/OVERLAYMENT/RECOVER BOARD

1. DensDeck®

A siliconized gypsum, fire-tested hardboard with glass-mat facers. DensDeck is provided in 4 ft. x 4 ft. (1.2 m x 1.2 m) and 4 ft x 8 ft (1.2 m x 2.4 m) board size and in thicknesses of 1/2 ". Consult Product Data Sheet for size, thickness and additional information.

2. Insulation

A. Rigid Insulation Board: Polyisocyanurate foam core bonded to a glass fiber mat facers and approved by the membrane manufacturer for a fully adhered membrane system meeting the Factory Mutual I-130 uplift requirement. The rigid insulation sheets shall be 4 feet by 4 feet (non-tapered) and 4 feet by 4 feet (tapered), and have an average R value of 7 per inch, using the ASTM C518 test at 75°F. The insulation must meet the following typical physical properties:

Property	Test Method	Typical Results
Dens., Overall	ASTM C209	2.0 pcf (nom.)
Comp. Strength	ASTM D 1621	20 psi
Flame Spread	ASTM E 84	25 or less
Moisture Vapor Transmission	ASTM E 96	Less than 1 perm.
Dim. Stability	ASTM D2126	Less than 2% linear change
Service Temp.	----	-100°F to +200°F

Two manufacturers and insulation materials that are acceptable to the FAA and meet the typical physical properties are as follows:

Johns-Manville:
Non-tapered sections: ISO 3
Tapered sections: Tapered ISO 3

Rmax, Inc.
Non-tapered sections: MULTIMAX FA-3
Tapered sections: Tapered Thermaproof-3

7A.3 INSTALLATION:

General:

A. Insulation: Insulation shall be installed according to the manufacturer's requirements and recommendations. Install insulation using the
fastener see Pattern on the mechanical roof system. Built as shown on the drawings. Installation shall meet the uplift and wind 100 mph loading requirements.

The insulation shall be two 1.5" layer of insulation board with stager joints, shall not be wider than 1/8". Do not install more insulation board than can be covered with roofing membrane by the end of the day or the onset of inclement weather.

Stagger end joints of adjacent lengths. Butt ends and edges. Installation shall be as recommended by the roof system manufacturer and shall meet the uplift and wind loading requirements.

Install tapered insulation around drains creating a drain sump.

Use at least 2 layers of insulation when the total insulation thickness exceeds 2-1/2 inches (64 mm). Stagger joints at least 12 inches (0.3 m) between layers.

2.05 ATTACHMENT COMPONENTS

1. Sarnadisc Inductive

A high strength plate with a polymer coating used with various Sarnafasteners to attach insulation boards to the roof deck and as a substrate to induction weld the roof membrane. Sarnadisc is a 3 inch (75 mm) round, 22 gauge corrosion resistant steel plate. Consult Product Data Sheet for additional information.

2. Sarnafastener-XP

A #15, heavy-duty, corrosion-resistant fastener used with Sarnaplate to attach insulation or Sarnadisc, Sarnadisc-XPN and Sarnabar to attach PVC PVC POLYESTER REINFORCED MEMBRANE roof membrane to steel roof decks. Sarnafastener-XP has a shank diameter of approximately 0.21 inch (5.3 mm) and the thread diameter is approximately 0.26 inch (6.6 mm). The driving head has a diameter of approximately 0.435 inch (11 mm) with a #3 Phillips recess for positive engagement. Consult Product Data Sheet for additional information.

2.06 WALKWAY PROTECTION

A. Sarna tread (walkway tread)

A polyester reinforced, 0.096 inch (96 mil/2.4 mm), weldable membrane with surface embossment. Used as a protection layer from rooftop traffic. Sarnatred is supplied in rolls of 39.3 inches (1.0 m) wide and 32.8 feet (10 m) long. Consult Product Data Sheet for additional information.

2.07 MISCELLANEOUS ACCESSORIES

A. Aluminum Tape

A 2 inch (50 mm) wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond-breaker under the covers trip at Sarnaclad joints.

B. Sealing Tape Strip

Compressible foam with pressure-sensitive adhesive on one side. Used with metal flashings as a preventive measure against air and wind blown moisture entry.

C. Multi-Purpose Tape

A high performance sealant tape used with metal flashings as a preventive measure against air and wind blown moisture entry.

D. Inductive Induction Welder

A 110 volt heating/welding device that creates a radio frequency that allows the membrane to be welded to the specially coated plate.

E. Sarnamatic 641mc or 661

220 volt, self-propelled, hot-air welding machine used to seal PVC membrane seams.

F. Sarnasolv

A high quality solvent cleaner used for the general cleaning of residual asphalt, scuff marks, etc., from the membrane surface. Sarnasolv is also used daily to clean seam areas prior to hot-air welding in tear off or dirty conditions or if the membrane is not welded the same day it is unrolled. Consult Product Data Sheet for additional information.

2.08 SEALANTS AND PITCH POCKET FILLERS

A. PVC Multi-Purpose Sealant (for termination details).

B. Sarnacol 2165 Adhesive (two-component urethane adhesive for pitch pocket toppings).

C. Depending on substrates, the following sealants are options for temporary overnight tie-ins:

1. Type III hot asphalt conforming to ASTM D312 (latest version).
2. Sarnacol 2165 Adhesive.
3. Multiple layers of roofing cement and felt.
4. Spray-applied, water-resistant urethane foam.
5. Mechanical attachment with rigid bars and compressed sealant.

2.09 MISCELLANEOUS FASTENERS AND ANCHORS

A. All fasteners, anchors, nails, straps, bars, etc. shall be post-galvanized steel, aluminum or stainless steel. Mixing metal types and methods of contact shall be assembled in such a manner as to avoid galvanic corrosion. Fasteners for attachment of metal to masonry shall be expansion type fasteners with stainless steel pins. All concrete fasteners and anchors shall have a minimum embedment of 1¼ inch (32 mm) and shall be approved for such use by the fastener manufacturer. All miscellaneous wood fasteners and anchors used for flashings shall have a minimum embedment of 1 inch (25 mm) and shall be approved for such use by the fastener manufacturer.

2.10 RELATED MATERIALS

A. Wood Nailer

Treated wood nailers shall be installed into the structural purlins at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings. Thickness of nailers must match the insulation thickness to achieve a smooth transition. Wood nailers shall be treated for fire and rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19% by weight on a dry-weight basis.

B. Plywood

When bonding directly to plywood, a minimum 1/2 inch (12 mm) CDX (C side out), smooth-surfaced exterior grade plywood with exterior grade glue shall be used. Rough-surfaced plywood or high fastener heads will require the use of Sarnafelt behind the flashing membrane. Plywood shall have a maximum moisture content of 19% by weight on a dry weight basis.

PART 3 - EXECUTION

3.01 PRE-CONSTRUCTION CONFERENCE

A. The Applicator, Owner's Representative/Designer and Manufacturer(s) shall attend a pre-construction conference.

B. The meeting shall discuss all aspects of the project including but not limited to:

1. Safety
2. Set up
3. Construction schedule
4. Contract conditions
5. Coordination of the work

3.02 SUBSTRATE CONDITION

A. Applicator shall be responsible for acceptance or provision of proper substrate to receive new roofing materials.

B. Applicator shall verify that the work done under related sections meets the following conditions:

1. Roof drains, gutters and/or scuppers have been reconditioned and/or replaced and installed properly.

2. Roof curbs, nailers, equipment supports, vents and other roof penetrations are properly secured and prepared to receive new roofing materials.
3. All surfaces are smooth and free of dirt, debris and incompatible materials.
4. All roof surfaces shall be free of water, ice and snow.

3.03 SUBSTRATE PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Owner's Representative and Applicator shall determine the condition of the roof deck. Deteriorated decking or wet or deteriorated materials are to be removed and replaced. The Applicator shall load materials on the rooftop in such a manner as to eliminate risk of deck overload due to concentrated weight. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind loads in that location. A structural evaluation by a licensed structural engineer should be performed to determine that the combined weight of the roofs, other collateral, and live loads do not exceed the load capacity of the structure.

3.04 SUBSTRATE INSPECTION

A. A dry, clean and smooth substrate shall be prepared to receive the Roofing manufacturer Sarnafast mechanically-attached roof system.

B. The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.

C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.

D. All roof surfaces shall be free of water, ice and snow.

E. Compressible fill material or spray, expanding urethane foam shall be used to minimize air infiltration under wood nailers for corrugated metal roof panels.

F. Roofing manufacturer shall be applied over compatible or acceptable substrates only.

3.05 VAPOR BARRIER/AIR BARRIER INSTALLATION NOT APPLICABLE

3.06 WOOD NAILER INSTALLATION

A. Install wood nailers at the perimeter of the entire roof and around roof projections and penetrations as shown on the Detail Drawings.

B. Nailers shall be anchored to the structural elements with Sarnafastener-Purlin to resist a minimum force of 300 pounds per lineal foot (4,500 Newtons/lineal meter) in any direction. Individual nailer lengths shall not be less than 3 feet (0.9 meter) long. Nailer fastener spacing shall be no more than 12 inches (0.3 m) on center or at a distance to match the structural framing. Fasteners shall be staggered 1/3 the nailer width and installed within 6 inches (0.15 m) of each end. Two fasteners shall be installed at ends of nailer lengths. Nailer attachment shall also meet the requirements of the current Factory Mutual Loss Prevention Data Sheet 1-49.

1. Standing Seam Deck

   Fasteners shall be within 6 in. (0.15 m) of the high point of the standing seam.

2. Corrugated Deck

   Area below the wood nailer shall be filled with compressible insulation or spray foam.

3. Flat Seam Deck

   Bottom of the wood nailer shall be notched to accommodate deck seams.

C. Thickness shall be as required to match the total substrate and/or insulation height to allow a smooth transition.

D. Any existing nailer woodwork which is to remain shall be firmly anchored in place to resist a minimum force of 300 pounds per lineal foot (4,500 Newtons/lineal meter) in any direction and shall be free of rot, excess moisture or deterioration. Only woodwork shown to be reused in Detail Drawings shall be left in place. All other nailer woodwork shall be removed.

E. Stainless steel, corrosion resistant, fasteners are required when mechanically attaching any Roofing manufacturer product to wood nailers and wood products treated with ACQ (Alkaline copper Quaternary). When ACQ treated wood is used on steel roof decks or with metal edge detailing, a separation layer must be placed between the metal and ACQ treated wood.

3.07 INSULATION INSTALLATION

General Criteria:

A. Insulation shall be installed according to insulation manufacturer's instructions.

B. Areas between standing seams shall be filled with polyisocyanurate, expanded or extruded polystyrene insulation, with a minimum compressive strength of 20 psi. (137.8 kPa). The fill layer shall be cut to fit snug and flush with the top of the standing seam and secured to hold in place.

C. Top layer of insulation shall be the membrane underlayment, with edges butted together having no gaps greater than ¼ inch (6mm).

D. Insulation shall be neatly cut to fit around penetrations and projections with gaps not exceeding ¼ inch.

F. If applicable, install tapered insulation around drains creating a drain sump.

G. Do not install more insulation board than can be covered with PVC membrane by the end of the day or the onset of inclement weather.

H. Use at least 2 layers of insulation when the total insulation thickness for the overlayment exceeds 2-1/2 inches (64 mm). Stagger joints at least 12 inches (0.3 m) between layers.

I. Mechanical Attachment - General

Insulation shall be mechanically fastened to the purlins with Sarnafastener Purlin or the structural deck with approved fasteners and pvc coated Sarnadisc Inductive according to the insulation manufacturer's, Roofing manufacturer's and FM (if insured by FM) recommendations for fastening rates and patterns, but not less than 1 fastener per 5.33 square feet (4,952 square cm). The quantity and locations of the fasteners and plates shall also cause the insulation boards to rest evenly on the roof deck/substrate. Each insulation board shall be installed tightly against the adjacent boards on all sides. With Purlin attached system use the standard Sarnafastener #12 and Sarnaplate to ensure each board of insulation has at least 6 fasteners, one in each corner at one on either long side at the midpoint. The grid attached systems are adequate as is for the insulation attachment. No additional insulation fastening is required.

a) Fasteners are to be installed consistently in accordance with fastener manufacturer's recommendations. Fasteners are to have minimum penetration of 1 inch (25 mm) through the structural deck.

b) Use fastener tools with a depth locator and torque-limiting attachment as recommended or supplied by fastener manufacturer to ensure proper installation.

1. Inductive - Attachment to Purlins

   General

   Fasten the insulation so the Sarnadisc Inductive and Sarnafastener-Purlin will be centered over the structural purlin at a density according to Roofing manufacturer's and the wind design requirements. Fasteners must tight enough that the Sarnadisc does not turn, but not so tight as to deform the Sarnadisc.

2. Perimeter and Corner Areas

   The perimeter and corner area will be determined by building height and width and other conditions according to ASCE 7 guidelines, Roofing manufacturer Technical or FM LPDS 1-29 if insured by Factory Mutual. To meet the perimeter and corner uplift requirements, increase the fastening density by decreasing the spacing between fasteners along each fastener row in the perimeter and corner areas. The Sarnafastener-Purlin spacing shall be a maximum of 60% of the field spacing for the perimeter and 40% of the field spacing for the corner, but never closer than 3 inches (76 mm). See Detail Drawings.

   Notes:

   a) Perimeter area is defined as the outer boundary of the roof. If the roof is broken into different levels, each roof area shall be treated as an individual roof with its outer boundary being treated as a perimeter. Typically, internal expansion joints and firewalls are not considered to be full perimeters. Refer to Factory Mutual's Data Sheet 1-28 for more information.

   b) The ridge area is defined as the high point in the roof area formed by two intersecting planes. When the sum of the slopes is a minimum of 4 inches in 12 inches (30°), each side of the ridge shall be treated as a perimeter area.

3. Inductive - Membrane Attachment to Metal Panel (**Documented Pullout Tests Required**)

   General

   a) Fastener pullout tests shall be conducted on the metal roofing deck with approved fasteners by the manufacturer of the fasteners, or the specifier/designer for the project. A minimum of 15 pullouts for up to 50,000 square feet (4,650 square meters) of which 8 are to be in perimeter and corner zones. Seven additional pullouts for each additional 50,000 square feet (4,650 square meters) or portion thereof. A report indicating each pullout value with a roof plan noting location of the pullouts shall be submitted to the Roofing manufacturer Technical Department for review.

   b) Fasten the insulation so the Sarnadisc Inductive and Sarnafastener XP or MAXLoad (depending on pullout value) are placed in a 2' by 2' (0.6 by 0.6 m) or 2' by 3' (0.6 by 0.9 m) grid pattern according to PVC's and the wind design requirements. Fasteners must tight enough that the Sarnadisc does not turn, but not so tight as to deform the Sarnadisc.

E. Perimeter and Corner Areas

   The perimeter and corner area will be determined by building height and width and other conditions according to ASCE 7 guidelines, Roofing manufacturer Technical or FM LPDS 1-29 if insured by Factory Mutual. To meet the perimeter and corner uplift requirements, increased fastener density by decreasing the spacing between fastener points in one or both directions. The total tributary area to each fastener is no more than 60% for the perimeter and 40% for corners, based on the field of roof fastening density. The 3" (75 mm) membrane overlaps shall not be over the Sarnadisc Inductive. See Detail Drawings.

   Notes:

   a) Perimeter area is defined as the outer boundary of the roof. If the roof is broken into different levels, each roof area shall be treated as an individual roof with its outer boundary being treated

as a perimeter. Typically, internal expansion joints and firewalls are not considered to be full perimeters. Refer to Factory Mutual's Data Sheet 1-28 for more information.

b) The ridge area is defined as the high point in the roof area formed by two intersecting planes. When the sum of the slopes is a minimum of 4 inches in 12 inches (30°), each side of the ridge shall be treated as a perimeter area.

3.08 INSTALLATION OF PVC MEMBRANE

The surface of the insulation or substrate shall be inspected prior to installation of the PVC roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

F. Inductive - Attachment to Metal Panel (**Documented Pullout Tests Required**)

1. General

a) PVC 10 ft. (3.0 m), 5 ft. (1.5 m) or 6.5 ft. (2 m) full width rolls shall be placed over the installed boards. Membrane overlaps shall be shingled with the flow of water where possible.

b) **Tack welding of the membrane for purposes of temporary restraint during installation is not permitted**. Consult Roofing manufacturer's Technical Department for further information.

2. Field, Perimeter and Corner Areas

Over the properly prepared, installed and attached substrate surface following either the 2' by 2' (0.6 by 0.6 m) or 2' by 3' (0.6 by 0.9 m) grid pattern, PVC POLYESTER REINFORCED MEMBRANE full-width rolls are to be installed so as to properly shed water. See Detail Drawings.

3. Securement around Rooftop Penetrations

a) Around all perimeters, at the base of walls, drains, curbs, vent pipes, or any other roof penetrations, Sarnafasteners and Sarnadisc Inductive, Sarnadiscs or Sarnabars shall be installed according to perimeter rate of attachment. Fasteners shall be installed according to the manufacturer's instructions. Fasteners shall be installed using the fastener manufacturer's recommended torque-sensitive fastening tools with depth locators. If Sarnadisc Inductive is not used, the fasteners shall clamp the PVC membrane tightly to the substrate.

b) PVC membrane flashings shall extend 2-1/2 inches (63 mm) past the Sarnadisc or Sarnadisc-XPN, and 2-1/4 inches (57.2 mm) past the Sarnadisc-MAXLoad and be hot-air welded to the PVC deck membrane.

3.09 INDUCTIVE INDUCTION WELDING

A. General

1. Welding equipment shall be provided by or approved by Roofing manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by a Roofing manufacturer Technical Representative prior to welding.

2. All membrane to be welded shall be clean and dry.

B. Induction Welding

1. Activate the weld between membrane and plate using approved portable induction device. The induction coil must be positioned over the center of the Sarnadisc Inductive, +/- 1 inch (25 mm) Portable induction device must elevate the temperature of the Sarnadisc Inductive from ambient to 400 – 500° F (204 – 260° C). Cycle time will be affected by available power, use a heavy gauge power cord, at a minimum 12g by 100 ft.

2. When the induction welding cycle is complete, immediately place a Cool & Clamp magnetic weight on the welded assembly. This device must be left in place for at least 60 seconds.

3.10 HOT-AIR WELDING OF SEAM OVERLAPS

A. General

1. All seams shall be hot-air welded. Seam overlaps should be 3 inches (75 mm) wide for the Inductive System, 5-1/2 inches (140 mm) wide for Sarnadisc and Sarnadisc-XPN, and 7 inches (177.8 mm) wide for Sarnadisc-MAXLoad when automatic machine-welding and 4 inches (100 mm) wide when hand-welding, except for certain details.

2. Welding equipment shall be provided by or approved by Roofing manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by a Roofing manufacturer Technical Representative prior to welding.

3. All membrane to be welded shall be clean and dry.

B. Hand-Welding

Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.

1. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.

2. The nozzle shall be inserted into the seam at a 45° angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow," the hand roller is positioned perpendicular to the nozzle and rolled lightly. For straight seams, the 1-1/2 inch (40 mm) wide nozzle is recommended for use. For corners and compound connections, the 3/4 inch (20 mm) wide nozzle shall be used.

C. Machine Welding

1. Machine welded seams are achieved by the use of Roofing manufacturer's automatic welding equipment. When using this equipment, Roofing manufacturer's instructions shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated simultaneously off the generator.

2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.

D. Quality Control of Welded Seams

1. The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark grey material from the underside of the top membrane. On-site evaluation of welded seams shall be made daily by the Applicator at locations as directed by the Owner's Representative or Roofing manufacturer's representative. One inch (25 mm) wide cross-section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

3.11 MEMBRANE FLASHINGS

All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Roofing manufacturer. Approval shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the

Applicator's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.

A. Sarnacol Adhesive for Membrane Flashings

1. Over the properly installed and prepared flashing substrate, Sarnacol adhesive shall be applied according to instructions found on the Product Data Sheet. The Sarnacol adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be flashed. The bonded sheet shall be pressed firmly in place with a hand roller.

2. No adhesive shall be applied in seam areas that are to be welded. All panels of membrane shall be applied in the same manner, overlapping the edges of the panels as required by welding techniques.

B. Install Sarnabar/Sarnacord according to the Detail Drawings with approved fasteners into the structural deck at the base of parapets, walls and curbs. Sarnabars may be required by Roofing manufacturer at the base of all tapered edge strips and at transitions, peaks, and valleys according to Roofing manufacturer's details.

C. Roofing manufacturer's requirements and recommendations and the specifications shall be followed. All material submittals shall have been accepted by Roofing manufacturer prior to installation.

D. All flashings shall extend a minimum of 8 inches (0.2 m) above roofing level unless otherwise accepted in writing by the Owner's Representative and the Roofing manufacturer Technical Department.

E. All flashing membranes shall be consistently adhered to substrates. All interior and exterior corners and miters shall be cut and hot-air welded into place. No bitumen shall be in contact with the PVC membrane.

F. All flashing membranes shall be mechanically fastened along the counter-flashed top edge with Sarnastop at 6-8 inches (0.15-0.20 m) on center.

G. PVC flashings shall be terminated according to Roofing manufacturer recommended details.

H. All adhered flashings that exceed 30 inches (0.75 m) in height shall receive additional securement. Consult Roofing manufacturer Technical Department for securement methods.

I. All mechanically-attached flashings that exceed 18 inches (0.46 m) in height shall receive additional securement. Consult Roofing manufacturer Technical Department for securement methods.

3.12 METAL FLASHINGS

A. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:

1. Factory Mutual Loss Prevention Data Sheet 1-49 (latest issue).
2. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - latest issue.

B. Metal, other than that provided by Roofing manufacturer, is not covered under the Roofing manufacturer warranty.

C. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.

D. Metal shall be installed to provide adequate resistance to bending to allow for normal thermal expansion and contraction.

E. Metal joints shall be watertight.

F. Metal flashings shall be securely fastened into solid wood blocking. Fasteners shall penetrate the wood nailer a minimum of 1 inch (25 mm).

G. Airtight and continuous metal hook strips are required behind metal fascias. Hook strips are to be fastened 12 inches (0.3 m) on center into the wood nailer or masonry wall.

H. Counter flashings shall overlap base flashings at least 4 inches (100 mm).

I. Hook strips shall extend past wood nailers over wall surfaces by 1½ inch (38 mm) minimum and shall be securely sealed from air entry.

3.13 SARNACLAD METAL BASE FLASHINGS/EDGE METAL

All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Roofing manufacturer. Acceptance shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.

A. Sarnaclad metal flashings shall be formed and installed per the Detail Drawings.

1. All metal flashings shall be fastened into solid wood nailers with two rows of post galvanized flat head annular ring nails, 4 inches (100 mm) on center staggered. Fasteners shall penetrate the nailer a minimum of 1 inch (25 mm).

2. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.

B. Adjacent sheets of Sarnaclad shall be spaced ¼ inch (6 mm) apart. The joint shall be covered with 2 inch (50 mm) wide aluminum tape. A 4 inch minimum (100 mm) wide strip of PVC flashing membrane shall be hot-air welded over the joint. Exercise caution at perimeter of roof. Workers shall follow OSHA safety procedures.

3.14 TEMPORARY CUT-OFF

All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. All temporary waterstops shall be constructed to provide a 100% watertight seal. The stagger of the insulation joints shall be made even by installing partial panels of insulation. The new membrane shall be carried into the waterstop. The waterstop shall be sealed to the deck and/or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of sealant as described in Section 2.09. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed from the work area and properly disposed of off site. None of these materials shall be used in the new work.

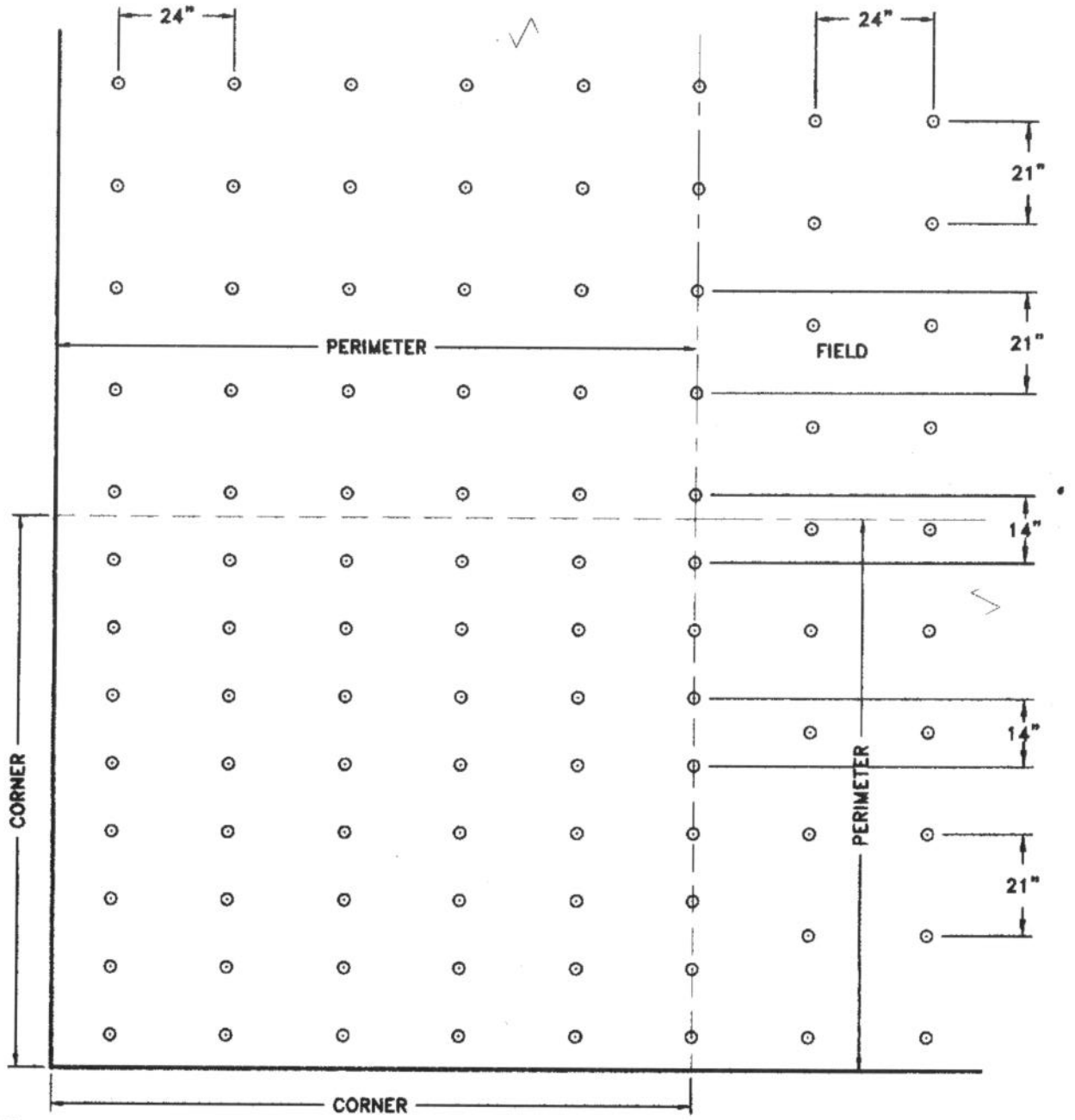
If inclement weather occurs while a temporary waterstop is in place, the Applicator shall provide the labor necessary to monitor the situation to maintain a watertight condition.

If any water is allowed to enter under the newly-completed roofing, the affected area shall be removed and replaced at the Applicator's expense.

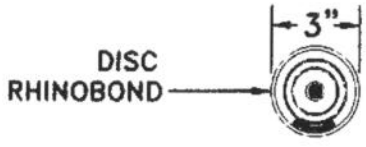
3.15 COMPLETION

Prior to demobilization from the site, the work shall be reviewed by the Owner's Representative and the Applicator. All defects noted and non-compliances with the Specifications or the recommendations of Roofing manufacturer shall be itemized in a punch list. These items must be corrected immediately by the Applicator to the satisfaction of the Owner's Representative and Roofing manufacturer prior to demobilization.

All Warranties referenced in this Specification shall have been submitted and have been accepted at time of contract award.



NOTE:
IF FASTENER/PLATE FALLS AT BOARD JOINT, MOVE CLOSER TO ROWS INSTALLED SO FASTENER IS AT LEAST 3" OFF JOINT. START NEXT SPACING FROM THIS POINT.



HIGH WIND GRID

B. DIVISION 9 – FINISHES

09900 PAINTING

A. Scope of Work

The work described in this section involves the surface prep and field painting on the following surfaces:

Exterior:
Catwalk frame and panel under the cab window, railing, access door.

General Considerations: If a specific item or surface is not specifically referenced in the contract documents, paint the item or surface the same as similar adjacent materials or surfaces whether or not contract documents indicate colors, unless otherwise stated by the Contracting officer technical representative COTR.

No paint containing lead will be used under this contract. Existing paint is not believed to contain lead, however, it is the contractor's responsibility to test the existing paint and take the proper precautions for removal and disposal if the paint is tested positive.

If the contract documents do not indicate color or finish, will select from standard colors and finishes available.

B. Project Conditions

Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90°F (10 and 32°C).

C. Exterior Paint Schedule

Exterior Paint Schedule (Marine coated epoxy paint)

1. Ferrous Metal: Provide the following finishes systems over exterior ferrous metal.
AIR TRAFFIC CONTROL TOWER – EXTERIOR STEEL – OVER-COAT

Surface Preparation:

1. Remove all oil, grease, and surface contaminates per SSPC SP-1 using a minimum of 2500 psi pressure.
2. Hand Tool/Power Tool Clean surfaces per SSPC SP-2/3, to remove all loose rust and paint.

Coating System Prime Coat – Sherwin-Williams Macropoxy 920 Pre-Prime Epoxy @ 1.0 to 1.5 mils DFT.
Intermediate Coat - Sherwin-Williams Macropoxy 646 Fast Cure Epoxy @ 5.0 to 8.0 mils DFT.
Finish Coat – Sherwin-Williams Hi-Solids Polyurethane @ 2.0 to 4.0 mils DFT.

Surface Preparation:

Ferrous Metals: Clean non-galvanized ferrous-metal surfaces that have not been shop coated; remove rust, oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.

09651 RESILIENT FLOOR TILE

A. Scope of Work

Remove, dispose, replace of the fifth floor bathroom floor plywood, and tiles. Install new resilient rubber tiles and wall base on 1st floor.

Materials

1. FLOOR TILE

The resilient floor tiling should have the following properties:

A. Class: 1 (solid-color tile) or 2 (through-pattern tile) depending upon color choice.
B. Wearing Surface: Smooth.
C. Thickness: 0.125 inch.
D. Size: 12 by 12 inches.
E. Fire-Test-Response Characteristics: Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm per ASTM E 648.

One approved product is the Vinyl Composition Tile (VCT) by Armstrong World Industries, Inc.; Excelon Premium Tile, "Stonetex" series. Other manufacturer's which may have equal products:

a. Azrock Commerical Flooring, DOMCO.
b. Congoleum Corporation
c. Tarkett Inc.

2. WALL BASE

The resilient wall base shall have the following properties and come from the same manufacturer as the floor tiles or be approved by the floor tile manufacturer for use:

A. Type (Material Requirement): TS (rubber, vulcanized thermoset) or TP (rubber, thermoplastic).
B. Group (Manufacturing Method): I (solid, homogeneous) or II (layered).
C. Style: Cove (with top-set toe) and Straight (toeless).
D. Minimum Thickness: 0.125 inch.
E. Height: 4 inches minimum.
F. Lengths: Coils in manufacturer's standard length but not less than 48-inches.
G. Outside Corners: Premolded.
H. Inside Corners: Premolded.
I. Surface: Smooth.

B. Delivery, Storage, and Handling

Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store tiles on flat surfaces.

C. Project Conditions

Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile. Specified temperature shall be maintained at least 48 hours before, during, and 48 hours after the installation. After post installation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F. Close spaces to traffic during floor covering installation and 48 hours after floor covering installation.

D. Extra Materials

Furnish one (1) box of extra tile described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

E. Preparation

Prepare substrates according to manufacturer's written recommendations to ensure adhesion of resilient products. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

F. Tile Installation

Follow the product manufacturer's installation instructions.

1. Lay out tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter. Lay tiles square with room axis.
2. Match tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles. Lay tiles with grain running in one direction.
3. Scribe, cut, and fit tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.
4. Extend tiles into toe spaces, door reveals, closets, and similar openings.
5. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, non-staining marking device.
6. Install tiles on covers for telephone and electrical ducts and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of tile installed on covers. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
7. Adhere tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

G. Wall Base Installation

1. Apply wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
2. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.
3. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
4. Do not stretch wall base during installation.
5. On masonry surfaces or other similar irregular substrates, fill voids along top edge of wall base with manufacturer's recommended adhesive filler material.
6. Install premolded corners before installing straight pieces.

H. Cleaning

Perform the following operations immediately after completing resilient product installation:

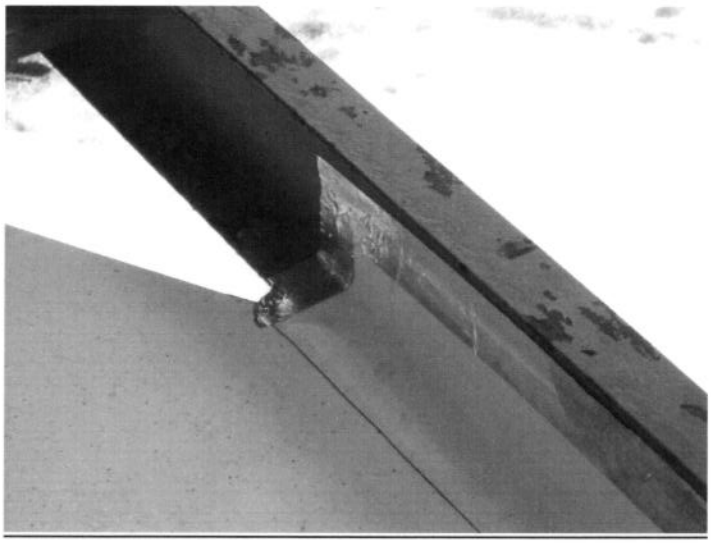
1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

Do not wash surfaces until after time period recommended by manufacturer.

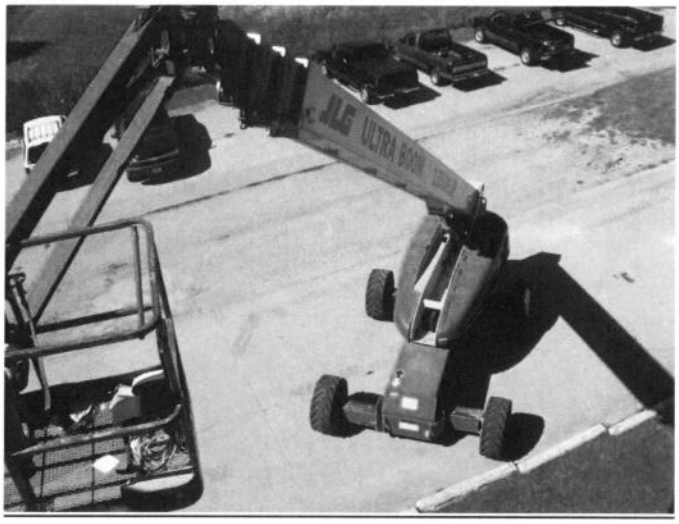
PICTURES:

View of the assembly of the wall detail

View of the wall flashing and corner

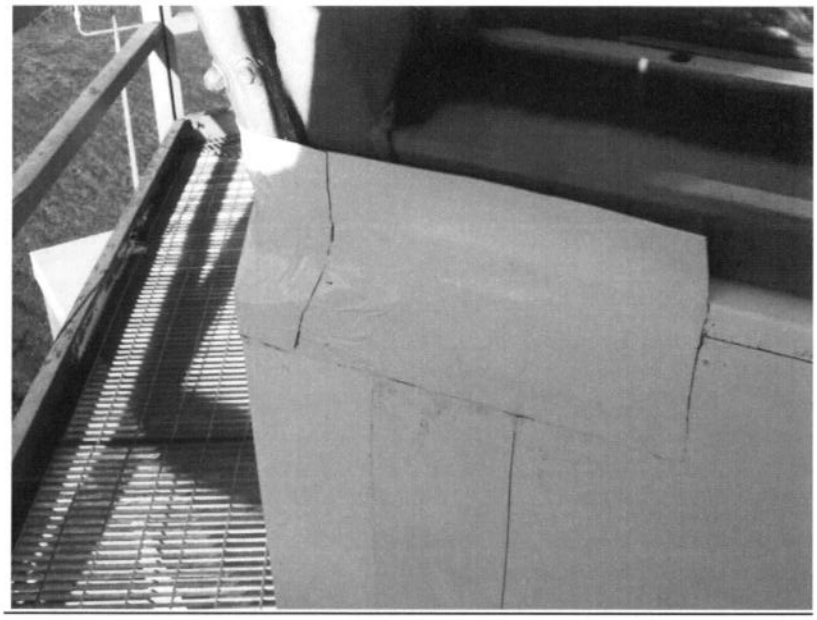


View of the assembly for roof corner and c-beam flashing detail:

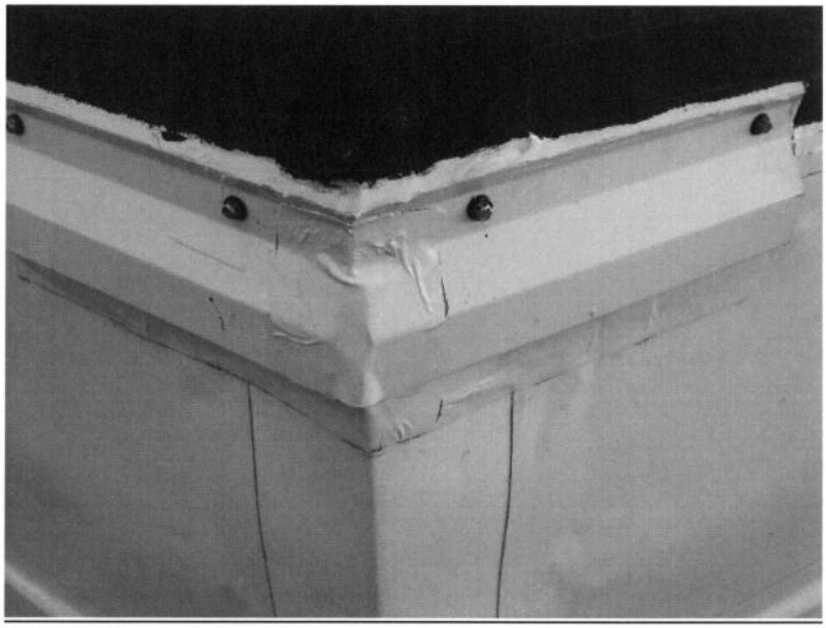


View of the Genie lift needed for this project.

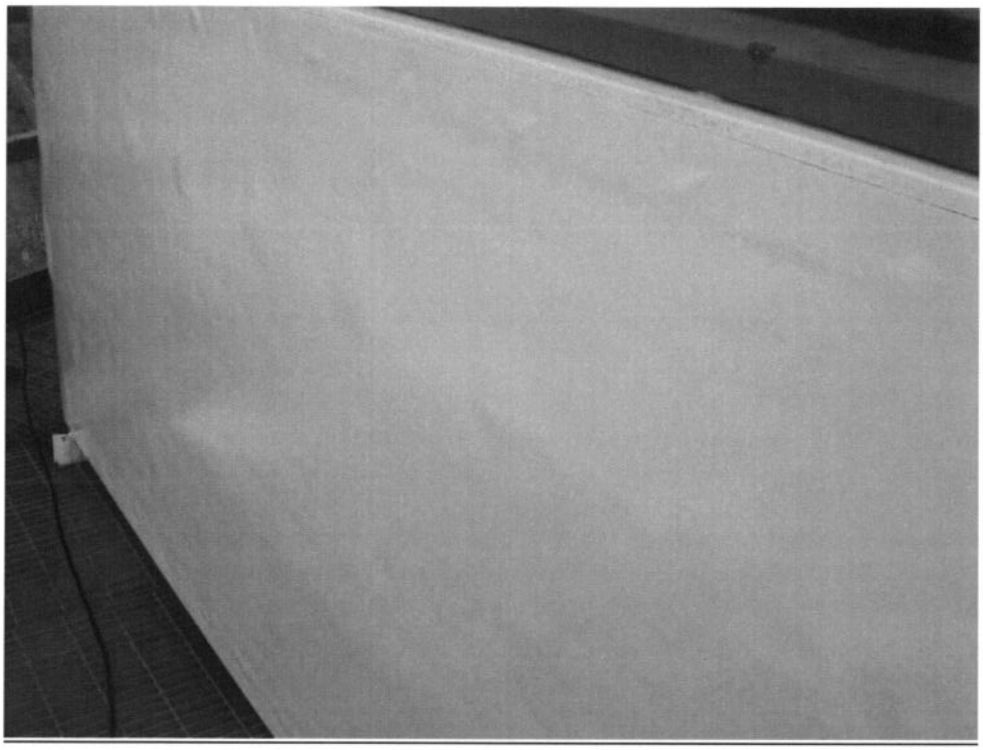
View of the insulating panel detail at the upper corner lower cab window Frame



View of the assembly corner flash detail:

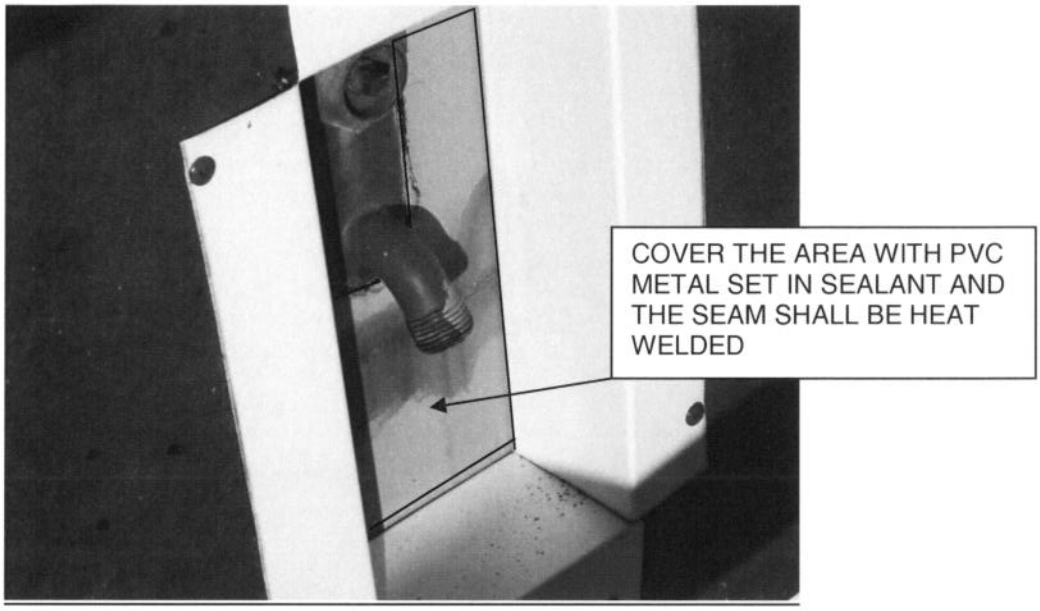


View of the finish corner detail:

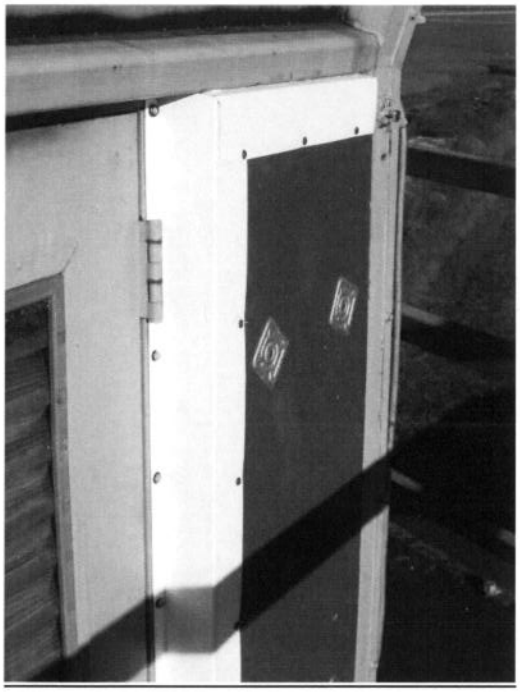


View of the insulated wall under the cab window.

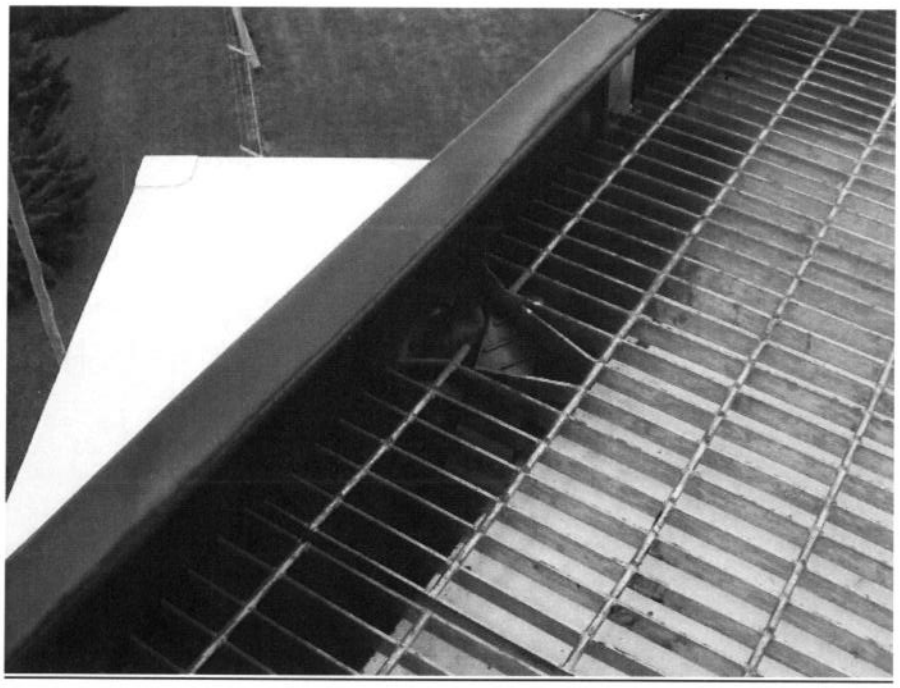
View of the catwalk lower corner detail



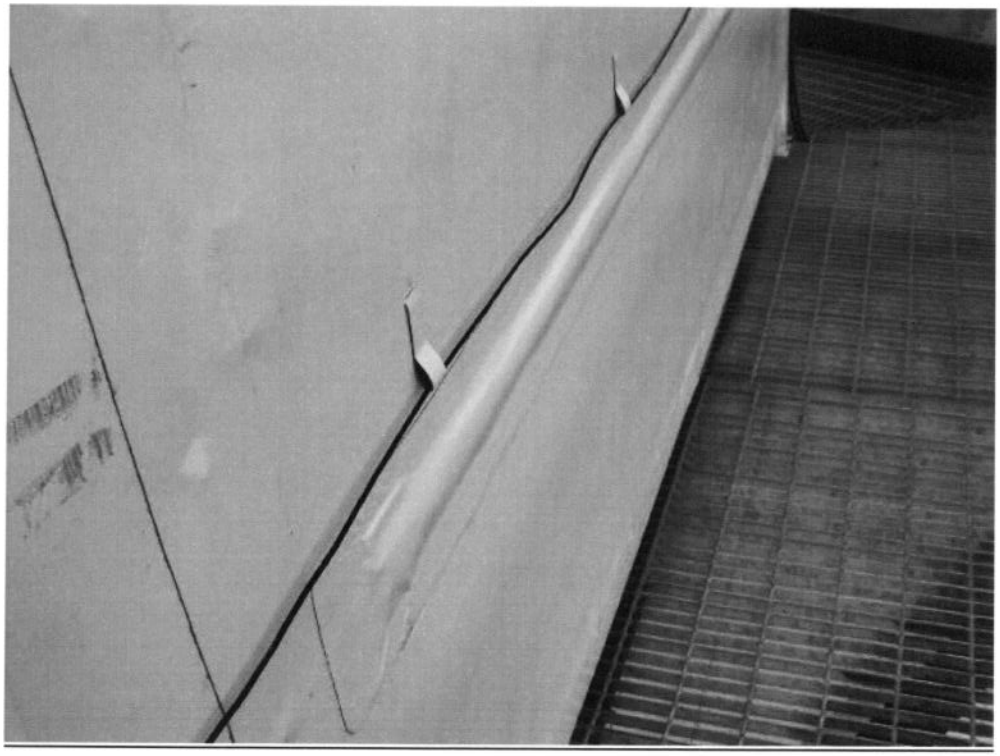
View of the water spigot detail:



View of the insulation assembly wall detail:

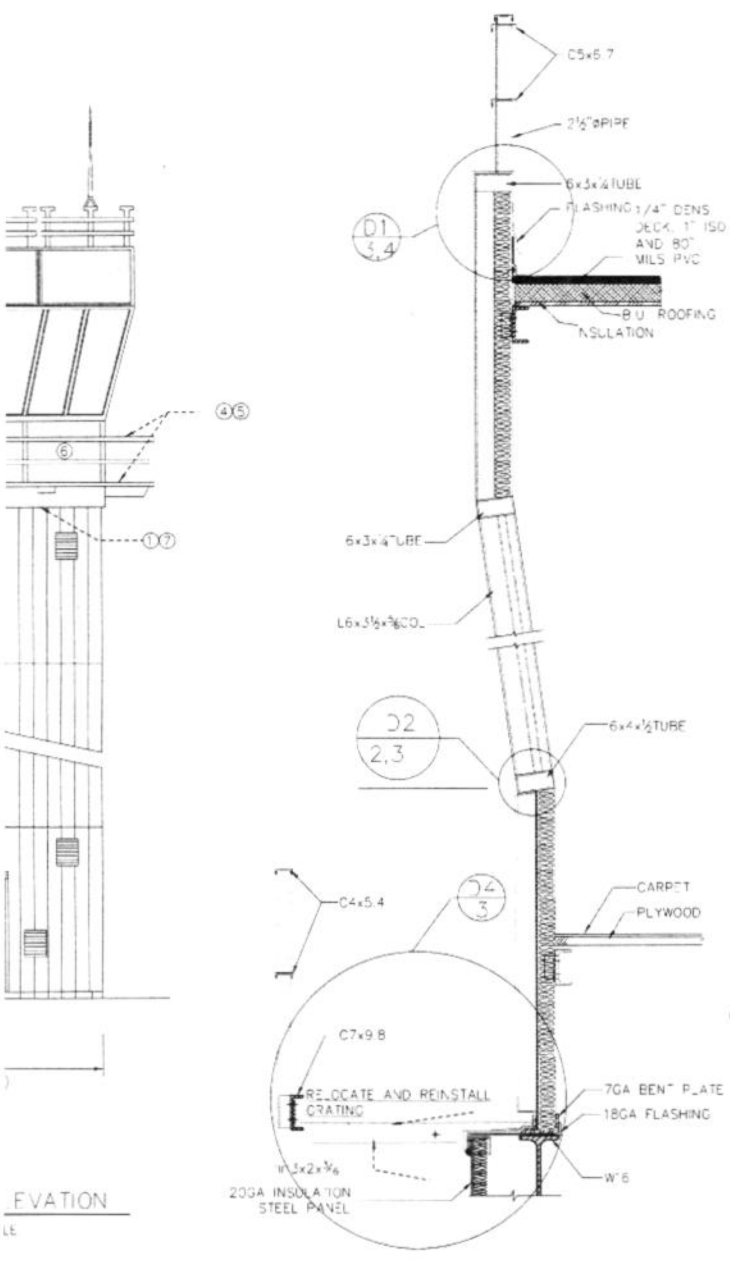


Final view of the corner roof C-beam detail:



Final view of the exterior insulated cab wall:

View of final product



S1 SECTION THROUGH CAB

NOT TO SCALE

NOTE

1. ALL DEMENTIONS AND FIGURES SHOWN ON DRAWING SO-D-2 NEED TO BE FIELD VERIFIED. CONTRACTOR SHALL MEASURE ALL NECESSARY SIZES ON SITE TO DETERMINE MATERIAL QUANTITIES.

LEGEND:

① REMOVE OLD CALLKING FROM THE STEEL FRAME UNDER THE CAB WINDOWS

② REMOVE THE RUST BY GRIND AND WIRE BRUSHES THE DETERIORATED AREAS OF THE LOWER CAB WINDOWS FRAME, CATWALK RAILINGS

③

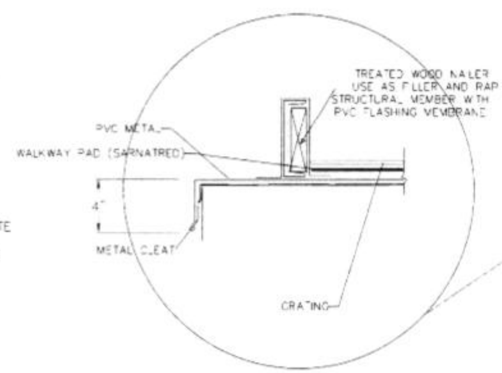
④ PRIME THE EXPOSE METAL AREAS AND APPLY TWO COAT OF RUST CONVERTING PRIMER **MICROPOXY PRIMER** 920 THEN APPLY ONE COAT OF MICROPOXY646 AND THE LAST COAT OF SHERWIN WILLIAMS HI SOLID POLYURETHANE

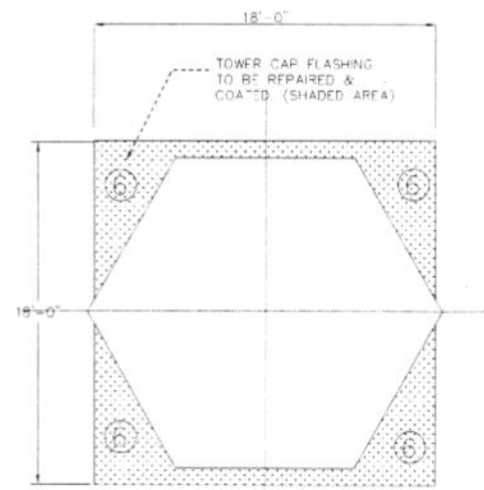
⑤ REMOVE AND REINSTALL THE UPPER CATWALK GRATING AFTER THE TOWER ROOF WAS DONE

⑥ WHILE THE CATWALK IS RELOCATED, CLEAN THE EXISTING TOWER METAL ROOF(FOUR CORNER), COVER THIS AREA WITH PVC METAL AND COVER THE VERTICAL WALL UNDER THE CAB WINDOW FRAME WITH 3" INSULATION AND PVC MEMBRANE

⑦ CAULK THE LOWER SECTION OF THE CAB WINDOWS FRAMES WITH DOW 795 OR EQUAL

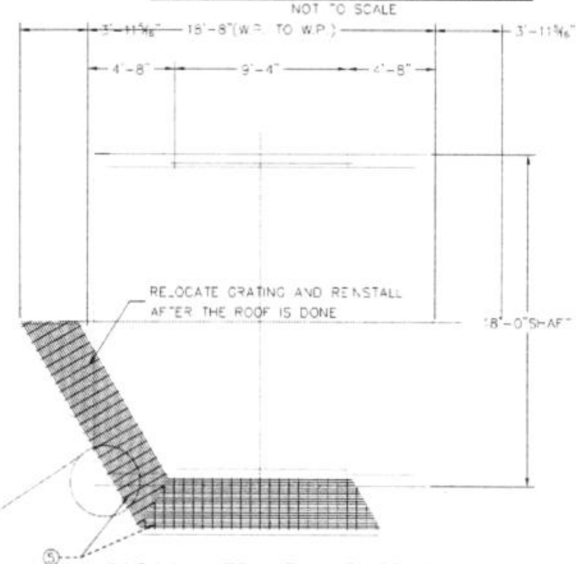
⑧ INSTALL A PVC METAL CAB FLASHING OVER THE PARAPET WALL AND FLASH THE RAILING WITH PVC MEMBRANE





TOWER ROOF FLASHING PLAN

NOT TO SCALE



CATWALK FRAME AND GRATING

NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHERN REGION — ATLANTA, GA

ELEVATION AND PLANS

TOWER ROOF AND CAB REPAIRS OF ISO ATCT

KINSTON, NORTH CAROLINA

ENGINEERING DESIGNED BY PC DRAWN BY PC CHECKED BY PC	SUBMITTED BY PABLO CALDERON CIVIL ENGINEER AJW E15N	APPROVED BY MANOJ BHATIA OPS ENG MANAGER DATE AUGUST 20, 2012 DRAWING NO. SO-2

SHEET 1 OF 1

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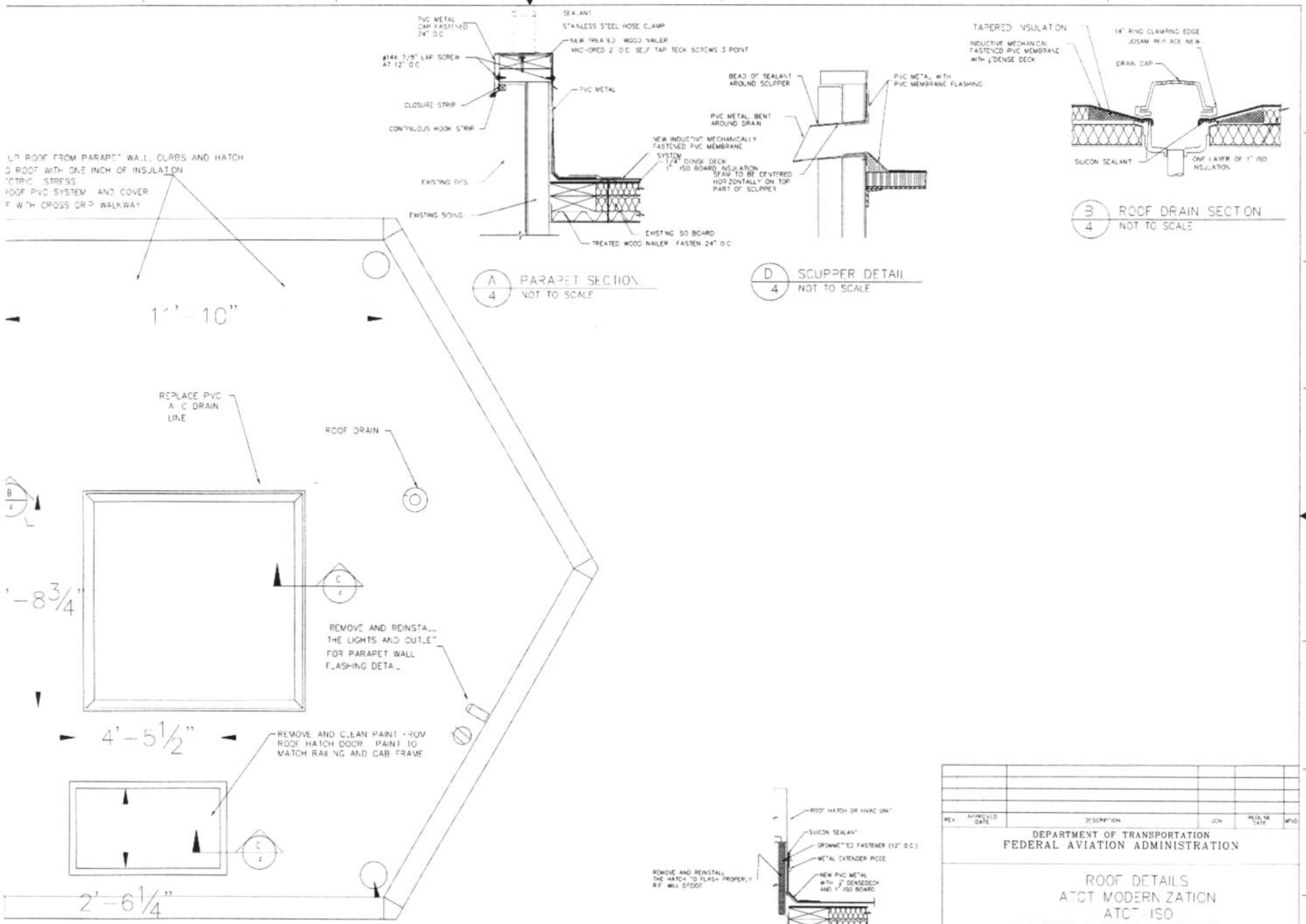
3					
2					
1					



ROOF PLAN
NOT TO SCALE

A/4 PARAPET SECTION
NOT TO SCALE

D/4 SCUPPER DETAIL
NOT TO SCALE

B/4 ROOF DRAIN SECTION
NOT TO SCALE

C/4 ROOF UNIT AND HATCH SECTION
NOT TO SCALE

REMOVE AND REINSTALL AFTER PARAPET WALL
FLASH THE AIR TERMINAL BASE SUPORT

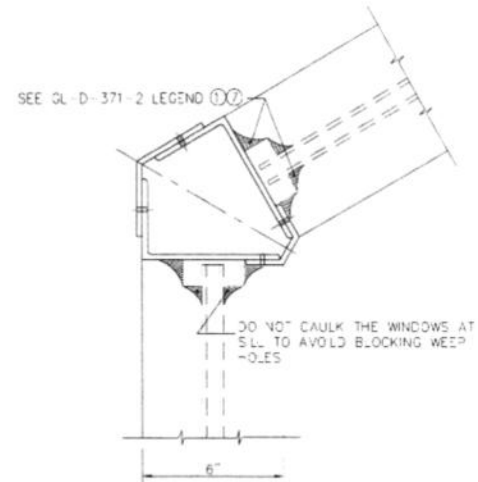
REV	APPROVED DATE	DESCRIPTION	JCN	REQUIRE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ROOF DETAILS
ATCT MODERNIZATION
ATCT ISO
KINSTON, NORTH CAROLINA

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PABLO CALDERON	VANOJ BHATA

DESIGNED	PCR	ISSUED BY	DATE	8/8/12	JCN
DRAWN	PCR		DRAWING NO	SO-4	REV
CHECKED					



D2 CAB CORNER WINDOW DETAIL
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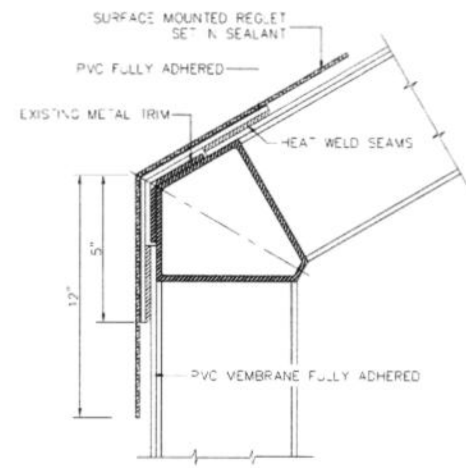

D3 CAB CORNER FLASHING DETAIL
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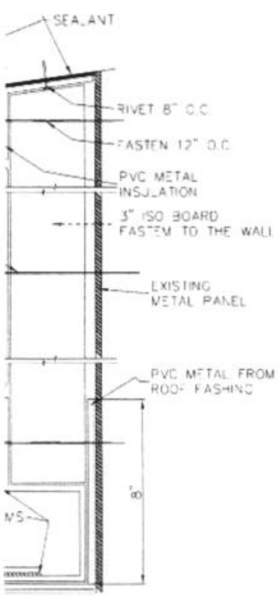
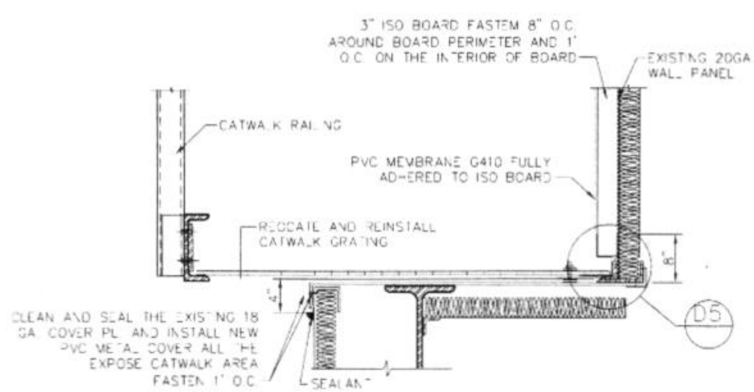


ALL DETAIL



D4 CATWALK FLASHING DETAIL
NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHERN REGION — ATLANTA, GA

DETAILS
TOWER ROOF AND CAB
ISO ATCT
KINSTON, NORTH CAROLINA

ENGINEERING	SUBMITTED BY PABLO CALDERON CIVIL ENGINEER		APPROVED BY MANOJ BHATIA OPS ENG MANAGER	
DESIGNED BY	PC			
DRAWN BY	PC		DATE AUGUST 17, 2012	
CHECKED BY	PC	ISSUED BY AJW E15N	DRAWING NO. SO-D-3	SHEET 1 OF 1

REV	DATE OF REVISION	DESCRIPTION	JOB ORDER NO	APVD	DATE OF FIELD AS BUILT
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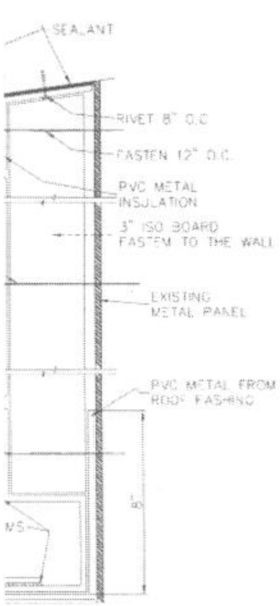
1					



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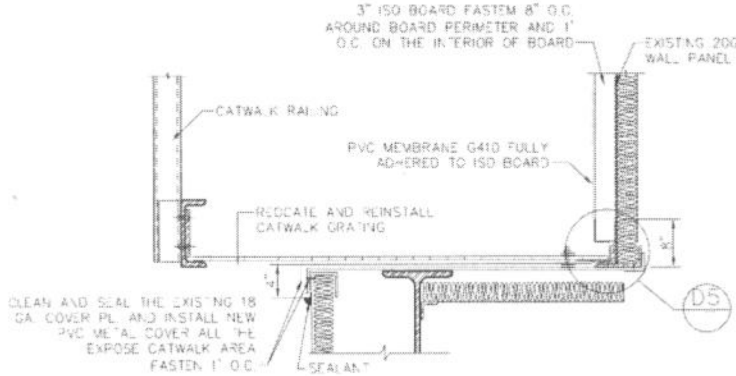

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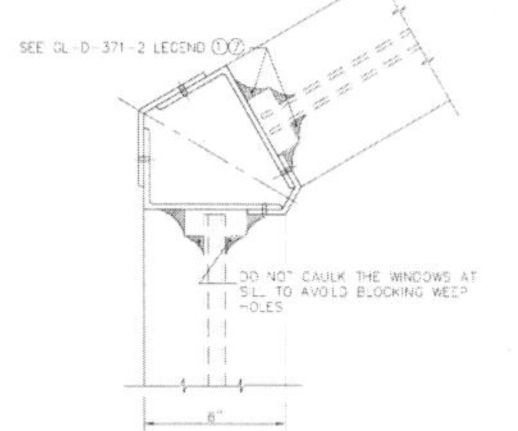

D2 CAB CORNER WINDOW DETAIL

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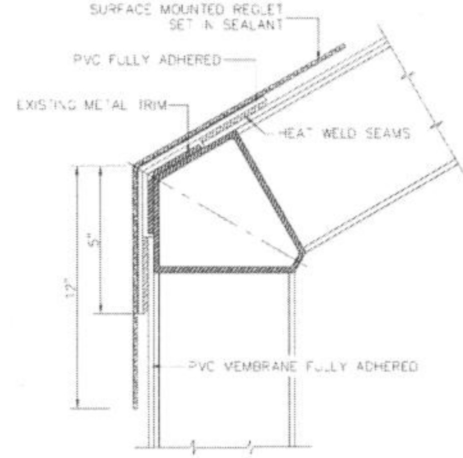

D3 CAB CORNER FLASHING DETAIL

NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHERN REGION — ATLANTA, GA

DETAILS
TOWER ROOF AND CAB
ISO ATCT
KINSTON, NORTH CAROLINA

ENGINEERING	SUBMITTED BY	APPROVED BY
PC	PABLO CALDERON, CIVIL ENGINEER	VANOJ BHATIA, OPS ENG. MANAGER
PC		
PC	AJW E15N	AUGUST 17, 2012
		SO-D-3

SHEET 1 OF 1

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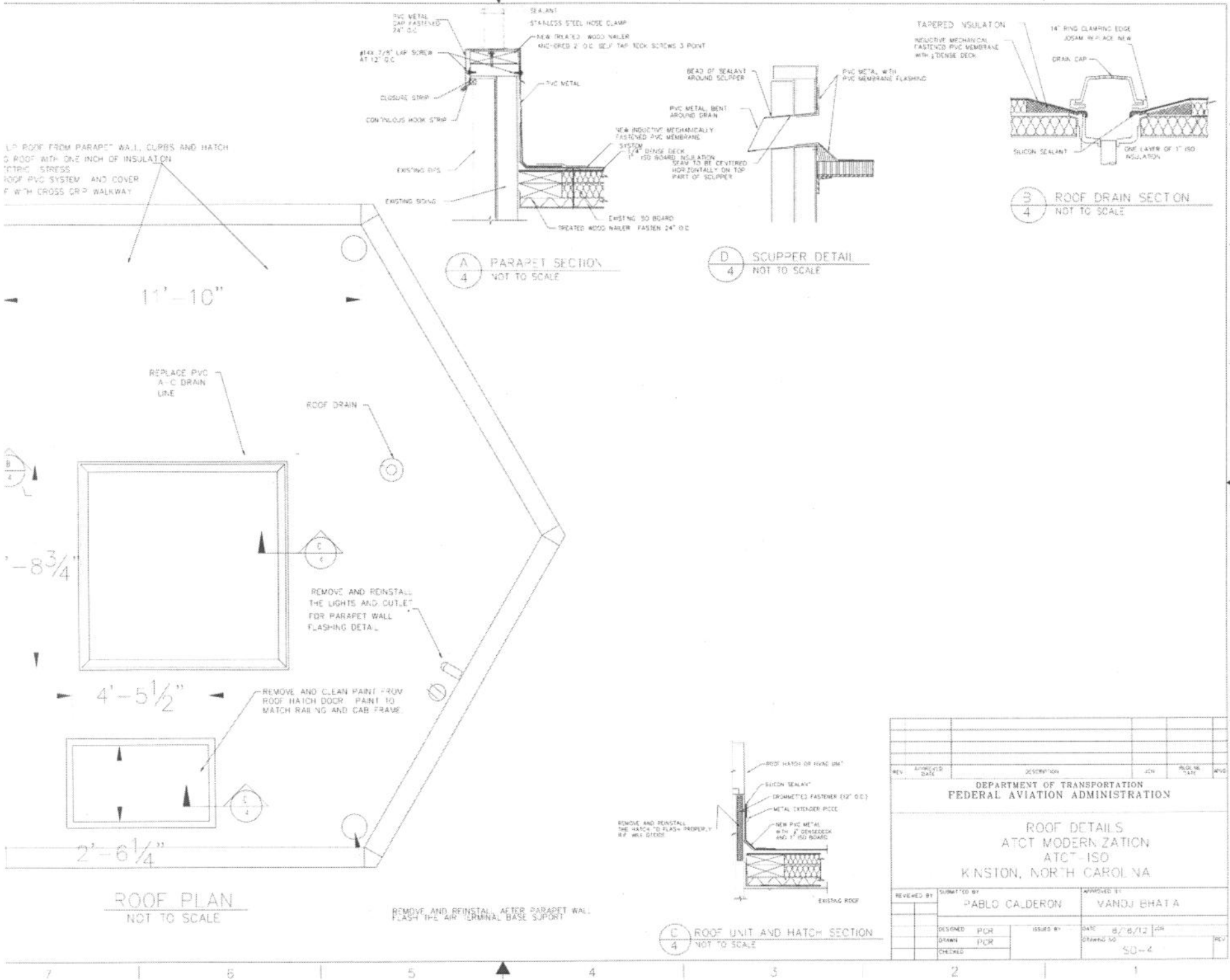


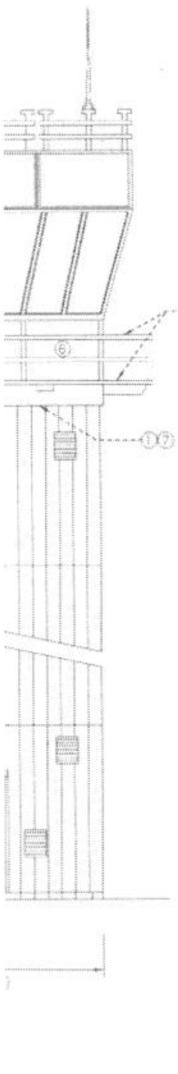
REV	AUTHORIZED DATE	DESCRIPTION	ADA	PROJECT MGR DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

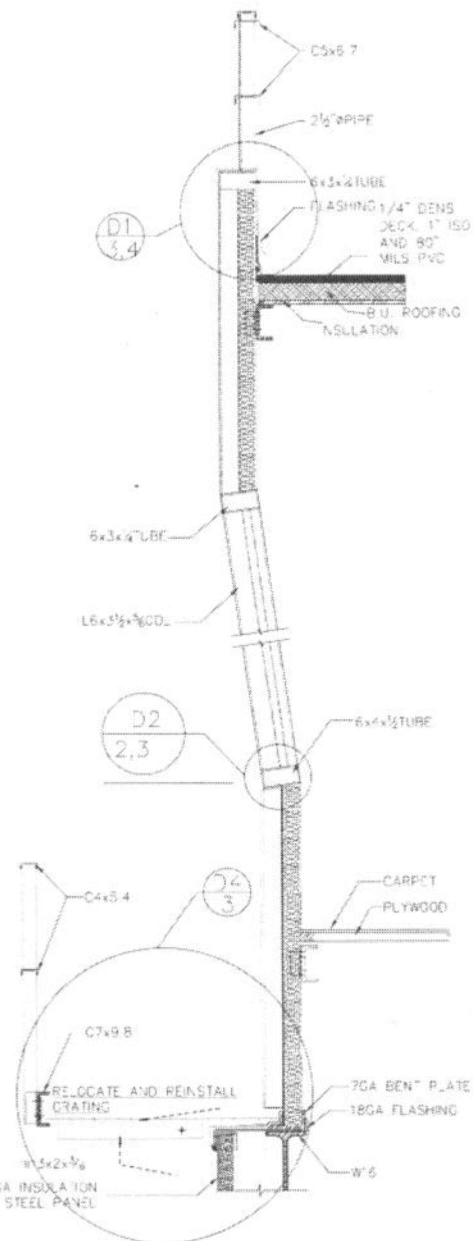
ROOF DETAILS
ATCT MODERNIZATION
ATCT-ISO
KINSTON, NORTH CAROLINA

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PABLO CALDERON	VANOJ BHATA

DESIGNED	PCR	ISSUED BY	DATE 8/28/12 ADA
DRAWN	PCR		DRAWING NO SD-4 REV
CHECKED			



ELEVATION



S1 SECTION THROUGH CAB

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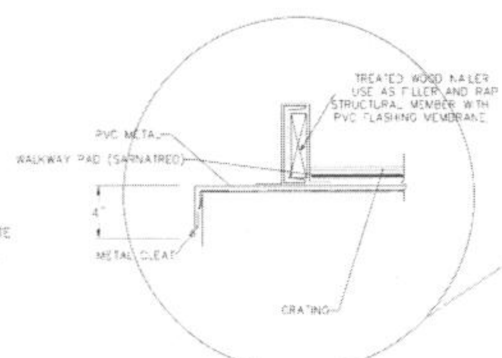

NOTE

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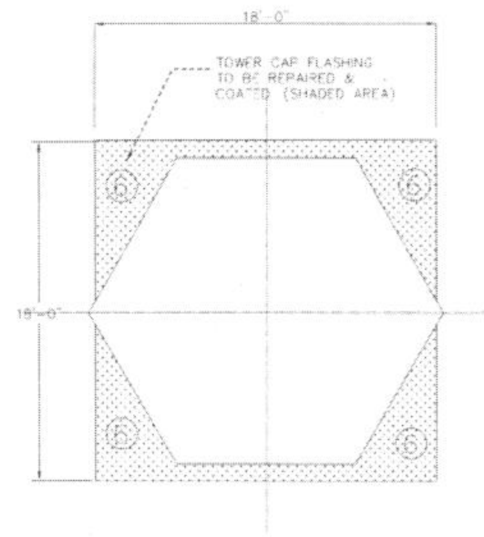
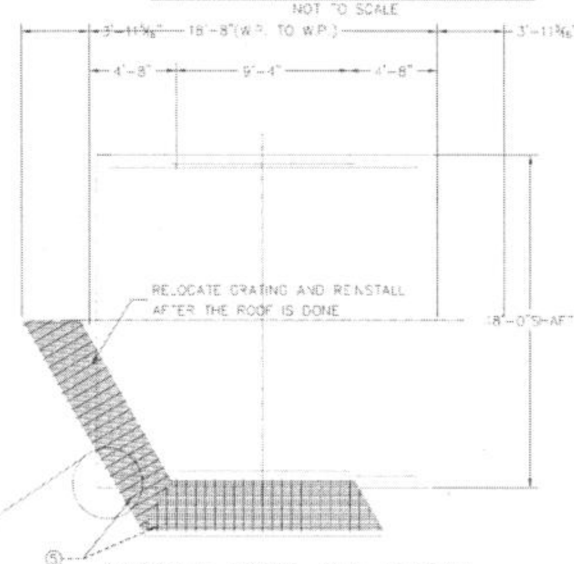
LEGEND:

1. REMOVE OLD CALKING FROM THE STEEL FRAME UNDER THE CAB WINDOWS
2. REMOVE THE RUST BY GRIND AND WIRE BRUSHES THE DETERIORATED AREAS OF THE LOWER CAB WINDOWS FRAME, CATWALK RAILINGS
3.
4. PRIME THE EXPOSE METAL AREAS AND APPLY TWO COAT OF RUST CONVERTING PRIMER MICROPOXY PRIMER 922 THEN APPLY ONE COAT OF MICROPOXY646 AND THE LAST COAT OF SHERWIN WILLIAMS HI SOLID POLYURETHANE
5. REMOVE AND REINSTALL THE UPPER CATWALK GRATING AFTER THE TOWER ROOF WAS DONE
6. WHILE THE CATWALK IS RELOCATED, CLEAN THE EXISTING TOWER METAL ROOF FOUR CORNERS, COVER THIS AREA WITH PVC METAL AND COVER THE VERTICAL WALL UNDER THE CAB WINDOW FRAME WITH 3" INSULATION AND PVC MEMBRANE
7. CAULK THE LOWER SECTION OF THE CAB WINDOWS FRAMES WITH DOW 795 OR EQUAL
8. INSTALL A PVC METAL CAB FLASHING OVER THE PARAPET WALL AND FLASH THE RAILING WITH PVC MEMBRANE



TOWER ROOF FLASHING PLAN

NOT TO SCALE



CATWALK FRAME AND GRATING

NOT TO SCALE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SOUTHERN REGION — ATLANTA, GA

ELEVATION AND PLANS

TOWER ROOF AND CAB REPAIRS OF ISO ATCT

KINSTON, NORTH CAROLINA

ENGINEERING	SUBMITTED BY: PABLO CALDERON, CIVIL ENGINEER	APPROVED BY: MANOJ BHASIA, OPS ENG. MANAGER	
DESIGNED BY: PC			
DRAWN BY: PC			
CHECKED BY: PC		DATE: AUGUST 20, 2012	
	AJW E15N	DRAWING NO. SO-2	SHEET 1 of 1

REV.	DATE OF REVISION	DESCRIPTION	JOB ORDER NO.	APPD.	DATE OF FIELD REVISION
4					
3					
2					
1					

General Decision Number: NC120066 07/20/2012 NC66

Superseded General Decision Number: NC20100103

State: North Carolina

Construction Type: Building

Counties: Davidson, Duplin, Lee, Lenoir, Montgomery and Moore Counties in North Carolina.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Modification Number	Publication Date
0	01/06/2012
1	07/06/2012
2	07/20/2012

* PLUM0421-004 07/01/2012

	Rates	Fringes
PIPEFITTER (Excluding HVAC System Installation)	$ 24.40	9.35

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* SUNC2011-047 08/26/2011

	Rates	Fringes
BRICKLAYER	$ 19.09	8.73
CARPENTER (Drywall Hanging Only)	$ 18.13	1.31
CARPENTER, Excludes Drywall Hanging, and Form Work	$ 15.93	2.99
CEMENT MASON/CONCRETE FINISHER	$ 14.02	0.00
ELECTRICIAN	$ 17.36	3.07
FORM WORKER	$ 16.08	3.48

GLAZIER	$ 18.16	0.87
HVAC MECHANIC (Installation of HVAC Unit Only, Excludes Installation of HVAC Pipe and Duct)	$ 15.41	2.60
IRONWORKER, STRUCTURAL	$ 18.75	5.62
LABORER: Common or General	$ 10.53	1.39
LABORER: Landscape & Irrigation	$ 10.29	1.82
LABORER: Mason Tender-Brick/Cement/Concrete	$ 11.31	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 17.98	0.91
OPERATOR: Crane	$ 19.25	2.37
OPERATOR: Grader/Blade	$ 15.71	1.49
PAINTER: Brush, Roller and Spray	$ 14.60	1.97
PLUMBER, Excludes HVAC System Installation	$ 17.42	2.29
ROOFER	$ 13.55	0.80
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 15.29	0.00
SHEET METAL WORKER, Excludes HVAC Duct and System Installation	$ 13.09	1.28
TRUCK DRIVER: Dump Truck	$ 13.14	1.01

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the

survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION